5: Roth E-4 (no date) 1892 OC6 Iban OC6

than the rest so as to hang loose on the hips. The series that encase the waist and the stomach fit close and are pinned together with brass wire; they are sometimes worn up to the nipples, but not every woman can afford to be at such great expense. 301

The *tinchien* is the body ornament of the Ulu Ai and Ngkari women. It is composed of some eight or ten parallel rows of large brass rings long enough to encircle the waist. They are strung on rattans and connected with one another by a network of cane inside. The ends of the band are furnished with a pair of vertical plates of the same metal, the outer edges of which are curled, the one inwardly, and the other outwardly, so as to catch one another, and effectively lock in the body. The rings (with the exception of every alternate one, which is an ordinary finger-ring), are long and broad, and rudely engraved a variety of patterns. These rings cost eight shillings a string, and a complete set of ten would cost five pounds.

The *selong* are dense coils of thick brass wire many fathoms in length, and of enormous weight, worn on the leg from the ankle joint to the thigh; they are not worn every day, as may readily be conceived.

The *gelang ghirieng* bracelet is not described.

Love of finery is inherent in the young of both sexes; the elderly are less fond of it and often dress very shabbily and save up their good clothes for their offspring. 291

The women sit with their legs straight out in front, and their petticoats tucked in between their thighs so as to expose nothing, but they expose their breasts. 516

The Sakarang girls are very fond of using an oil made from the *katioh* fruit, which has the scent of almonds; all their clothes are made from native cloth of native yarn, spun from cotton grown in the country. The inner bark of a tree called *ipoh* by the Dyaks and *tajam* by the Kyans, and which appears to be identical with the Upas tree of Java (*Antiaris toxicaria*), is used for clothing, and the young tree is grown for this purpose in Dyak gardens; the bark is not pulled off until a year after the tree has been felled. 302 324 286 248

Hair dressing.—The women make no attempt to part their hair but push it over the forehead and gather it into a knot at the back of the head—a plain or fancy one as the occasion may warrant. They use no oil of their own manufacture, but all who are able to afford the luxury may obtain it from the Malays. The hair is not so long as it might be, and is frequently cut short during dangerous illness. The circumstances of their lives are not favourable to a luxuriant growth. They have in common with the men their full share of exposure to 302

7:Gomes M-5 (ca. 1890)1911 OC6 Iban OC6

this waist-cloth is woven by the Dyak women, and then the end that hangs down in front has an elaborate pattern woven into it. Their head-dress is either a bright-coloured headkerchief, or else a small cap of woven cane, in which feathers and other ornaments are often stuck. The *tikai buret*, or seat-mat, is made either of the skin of some animal or of cane matting. Its edges are decorated with red and white cloth, and with beads or buttons.

Besides these articles of apparel the men sometimes wear a sleeveless jacket, or *klambi*. These are often woven by the Dyak women, either from yarn spun from cotton of their own growing or from imported yarn of a finer texture. More often in the present day they are made of cloth of European manufacture. The patterns of the Dyak-woven *klambi* are various, but those of a particular type can only be worn by men who have succeeded in securing a human head when on the warpath. The lower edge of this jacket is ornamented with beads, shells, and buttons, and bordered by a fringe.

In addition to the attire already mentioned, the men have sometimes a *dandong*, or shawl, which is thrown over the shoulders. The ornaments worn on the arms and legs are brass rings, which vary among the Dyaks of different districts. Armlets made from sea-shells are very much in favour among some inland tribes. The young men generally wear their hair long, cut in a fringe in front, and either hanging down loose behind, or tucked into their caps.

Tattooing is practised by most of the Dyaks in a greater or less degree. It is confined to the male sex, who often have little patterns tattooed on the forehead, throat-apple, shoulders, or chest.

The dress of the women consists of a petticoat (*kain*),

7:Gomes M-5 (ca. 1890)1911 OC6 Iban OC6

286 386 The cloth which the women weave is of two kinds, striped and figured. The former is made by employing successively threads of different colours in stretching the web. This is simple enough. The other pattern is produced by a more elaborate process. Undyed white thread is used, and the web stretched. The woman sketches on this the pattern which she wishes to appear on the cloth, and carefully notes the different colours for the different parts. If, for example, she wishes the pattern to be of three colours—blue, red, and white—she takes up the threads of the web in little rolls of about twenty threads, and carefully wraps a quantity of vegetable fibre tightly round those parts which are intended to be red or white, leaving exposed those parts which are intended to be blue. After she has in this manner treated the whole web, she immerses it in a blue [249] dye made from indigo, which the Dyaks plant themselves. The dye takes hold of the exposed portions of the threads, but is prevented by the vegetable fibre from colouring the other parts. Thus the blue portion of the pattern is dyed. After it has been dried, the vegetable fibre is cut off, and the blue parts tied up, and only the portion to be dyed red exposed, and the web put into a red dye. In this way the red part of the pattern is obtained. By a similar method all the colours needed are produced. The weft is of one colour, generally light brown.

286 Dyak weaving is a very slow process. The woman sits on the floor, and the threads of the weft are put through one by one. The cloth they make is particularly strong and serviceable. The women seem to blend the colours they use in a pleasing manner, though there is a great sameness in the designs.

300 Mats are made either with split cane or from the outer

11:Freeman E-5 (1949-1951)1957 OC6 Iban OC6

317 with small stones) the process was a slow one: to collect about
323 one *gantang* (gallon) of useable clay took 45 minutes. This amount, said Demai, would be enough for about five or six pots.

286 When we arrived back at the long-house Runin was busily occupied putting cotton on to a tying-frame (*tangga ajan*)—one of the most complicated processes in the technique of *ikat* weaving.
323 Unable to attend to the task herself she instructed Demai to go on with the next stage in the handling of the clay: the sunning
285 of it. Demai took a small mat (of the kind known as *tikai sengang*) and laid it out on that section of the *tanju*, or open platform of the long-house that belonged to Runin's apartment. Then, from the pile of clay she had collected in her basket she broke off small lumps—each about the size of a hen's egg—and laid them in rows on the mat. (Plate 2). It was by now mid-day. For the rest of that day and during the following morning the pieces of clay were left out in the full heat of the sun. The purpose of this, said Runin, was to dry the clay thoroughly, ready for the next process of pounding and sieving.

323 The clay laid out to sun, we returned with Demai to Runin's
784 apartment. Soon after we had sat down Mut, aged 18, the son
811 of Runin's deceased sister Giram and a member of Runin's *bilek* family, strode in. He had in his hands several cobs of corn
252 (*Zea mays*) which, so it appeared, he was intending to roast in the embers of the fire that was burning on the family hearth. Drying on a rack above this hearth were the two pots that Runin had made the previous day. As soon as she realized what he was about Runin called to him in an agitated voice to go to some other apartment to roast his corn, giving as her reason: *"Takut priok aku blah"* ("For fear that my earthenware pots should burst.") Mut gave a grin of understanding and at once left—carrying his corn. Here we have another prohibition (*pemali lingkau*) closely resembling that already mentioned. When corn is roasted those seeds which are exposed to the full heat of the fire often explode with distinctly audible 'pops.' It is the belief of the Iban that corn roasted in this way in close proximity to unfired clay pots may result in those pots exploding when in due course they come to be
373 fired. Similarly, there is a prohibition (*pemali getah*) against the use of damar gum in the vicinity of partially completed pots for the same reason that damar—an ancient form of illumination among the Iban—splutters and explodes as it burns.

mallet, which is grooved in deep cross cuts on its broad surface. This hammering breaks up the tissue of the bark and makes it more pliant but also accentuates any holes or rents, which are strengthened transversely by darning lines and patterns with thread made from the fibre of pineapple leaves or imported material (fig. 1).

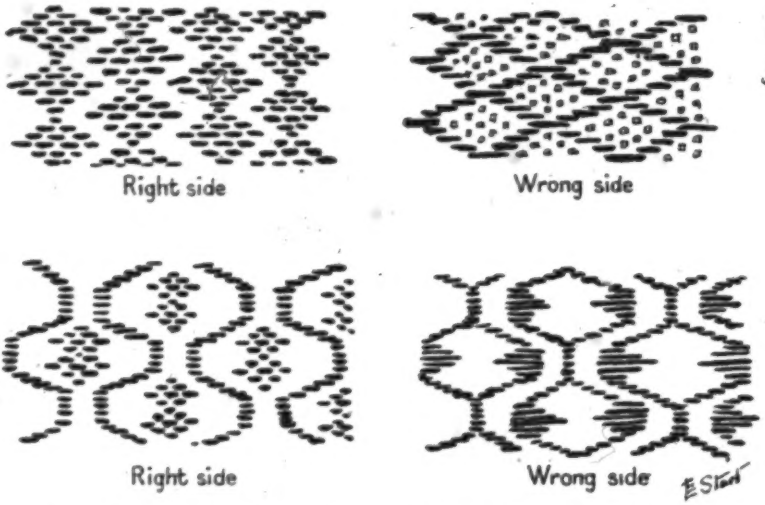

Fig. 1. Two patterns in transverse darning on a bark-cloth sleeveless jacket, open down the sides. British Museum (3425).

COTTON CLOTH

The cloths which are used for garments are usually of purely native manufacture and are entirely the work of the women, from the setting of the cotton seed to the making up of the garment when the cloth has been woven. The men make the wooden beams, battens, heddles and spools used in weaving, but otherwise take no part in the work.

In order to make our account more complete we incorporate information given by the Rev. W. Howell (1912, p. 61) which has not been recorded by other writers. He says that "separate farms or gardens (*empalai*) are set apart for growing cotton (*taya*). . . . After the cotton has been picked, taken

white colour of the future pattern. After this is done the *kebat* thread is taken out of the *tangga ubong* and dipped into *engkerbai* water for a night and then dried; this is a mixture made by boiling the leaves of the *engkerbai* shrub and mixing some *chunam* [lime] with it; this gives a reddish colour to the thread. After it is quite dry the thread is fixed again to the *tangga ubong* and *kebat* for the second time. This second *kebat* is to retain the reddish colour for the pattern, and is called *mampul*. The thread is again removed and dipped into *tarum*, indigo water, which is made from the indigo plant in the same way as the *engkerbai* water; this gives the exposed portions of the thread a black colour. After it is quite dry it is fixed for the last time to the *tangga ubong* to undergo *ngetas tampok lemba*, "the cutting off of the knots", that is, the cutting of the knots of *lemba*. This accomplished, the thread is carefully put into the loom for weaving.

283 386 [314] [314]

The use of tie-dyeing by other peoples is mentioned on pp. 138–142.

WEAVING

The *tumpoh* or loom used for weaving is extremely simple, being the most primitive form in Indonesia (Ling Roth, 1918, p. 65). Its component parts are a warp beam, breast beam, heddle, shed stick, beater-in, a back strap, and two or four laze rods (fig. 4). As there is no rigid framework the warp beam can be set up wherever there are two convenient upright posts, usually on the *ruai*, the verandah or long reception room. The breast beam, being attached to a back strap that goes round the weaver's waist, lies almost in her lap and so by a slight movement of her body she can manipulate the tension on the web (fig. 4).

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The warp is wrapped continuously round the warp and breast beams and the threads are prevented from becoming entangled by one or two pairs of laze rods, the odd threads or odd groups of threads being first lifted and one rod passed through, and then the evenly numbered threads are lifted and another rod is passed through the new shed. The ends of each pair of laze rods are usually tied together by a cord. Cane heading rods are also frequently used at the commencement of the weaving to keep the warps evenly stretched. There are generally a few rows of weaving between the two rods, if more than one is used. The raising of alternative warps, or groups of warps, is effected by a shed stick and the single heddle, to which one set of

●286 warp threads is fastened by loops or leashes. The latter may be arranged spirally or alternately on the heddle (fig. 5); and more than one end is sometimes threaded through a leash. A sword-shaped beater-in (fig. 6, *e*) is generally used to press home each pick of weft, the latter being carried on a spool, which is often as long as the web is wide, so that it easily passes from hand to hand (fig. 6, *f*).

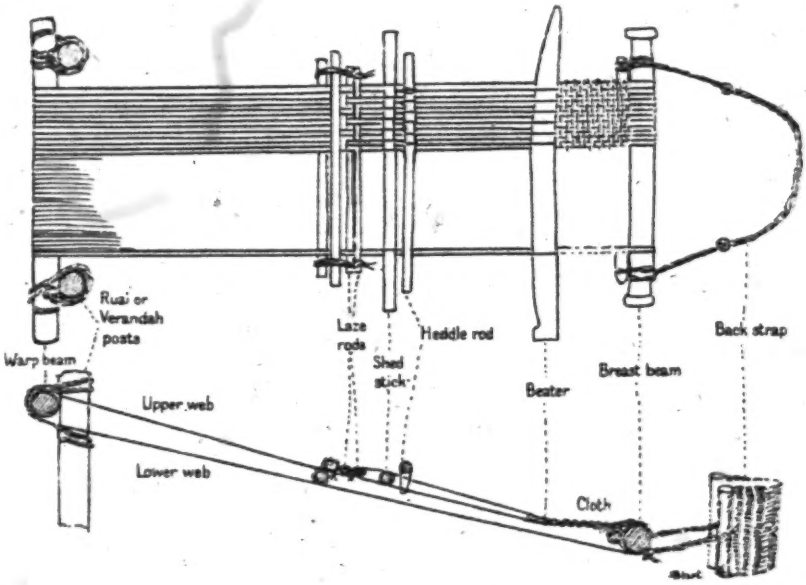

Fig. 4. Plan and elevation of a typical Iban loom, *tumpoh*.

Mr Ling Roth (1918, p. 68) indicates that loom pattern laze rods are sometimes used by the Iban, but the examples he describes seem to be for exceptional pieces of cloth which average less than 9 in. wide and vary from 30 in. to 24 in. in length. These are much narrower and shorter webs than any used for the clothing usually worn or than any of the cloths we have examined. In none of these, where the pattern has been produced by the method of warp dyeing just described, has there been any variation from a plain one up and one down like a "tabby weave", but, owing to the slackness

of the warp groups and the few picks of weft to the inch combined with the width of the weft threads, which are usually arranged in pairs side by side, the resulting cloth is a rep or poplin, that is, a warp-surfaced material, which has been produced by the use of one heddle and a shed stick. 286

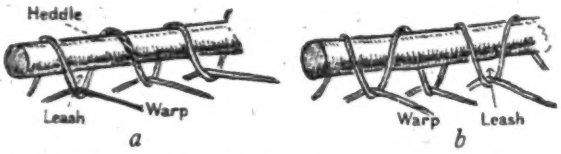

Fig. 5. Continuous heddle leashes: *a*, spiral; *b*, alternate. After Ling Roth, 1918, fig. 1 A.

Although Ling Roth has made a drawing (1918, p. 69) to explain how a pattern could be worked by means of laze rods, we do not know if the Iban ever use pattern laze rods. We are definitely of opinion that the pattern is produced by the *sunkit* method, see p. 88.

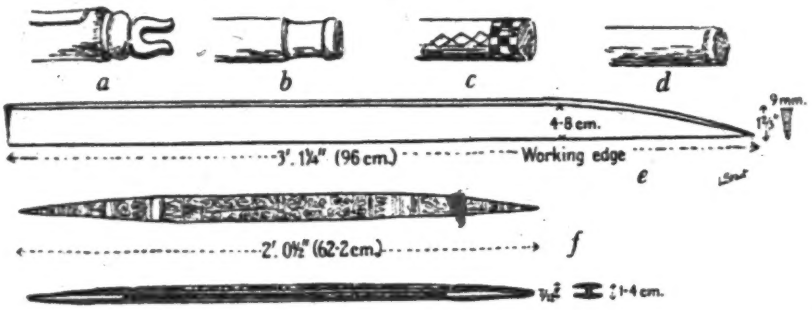

Fig. 6. Iban weaving implements: *a*, *b*, breast beam ends; *c*, *d*, warp beam ends; *e*, sword beater-in; *f*, spool. *a*, *f*, Museum of Ethnology, Cambridge (f. 25.551); *b*, *c*, Royal Scottish Museum, Edinburgh; *d*, *e*, Horniman Museum, London.

Sir James Brooke gave a *pua* to the British Museum (3430) woven with palm fibre; the patterns are those characteristic of ordinary *pua*, but are much less clear.

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

THE MAKING OF PATTERNS OTHER THAN WARP-DYED

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In addition to the warp-dyed method patterns are produced on the finer cloths woven on the *tumpoh* or primitive loom of the Iban by

(1) Pure embroidery.

(2) The use of free spools to give an embroidered effect.

(3) A form of tapestry weaving or weft-mosaic carried out with the needle.

(4) Brocade weaving with free spools or needles.

(5) Slight variations produced by manipulation of the weft.

When the Malay or *tanjak* loom is used with its series of heddles and treadles, more sophisticated and generally geometric patterns are produced, and Ling Roth mentions the use of pattern laze rods for the same purpose. These methods are refinements which are not typically Iban, and it is noticeable that the cloths woven by the Iban on the Malay loom are always inferior in quality to those woven on their own simpler type of loom.

Referring to the different possibilities of producing pattern it may be noted that (1) and (2) are chiefly used on *kalambi* and *sirat*, (3) and (4) are almost entirely confined to the working of badges and (5) occurs occasionally on *kalambi* and *sirat*, but more often as the heading to the *pua*.

Embroidery and the use of free spools

The raised patterns produced by embroidery can also be made by the use of free spools, used to pick up threads when needed and then allowed to hang from the web until required again; the weft passes across the back of the cloth from one motive to another.

This is a method used by the Malays and is much more difficult than embroidery, and as the Iban do not often use the *tenjak* for their weaving but prefer their more simple *tumpoh*, it seems reasonable to suppose that they would choose the easier method in working the raised type of pattern.

J. A. Loebèr, Jn. reproduces some examples with patterns of this type and describes them as having "flottante inslag"—floating weft—which might apply to either method, and in order to find out whether an example

12; Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

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has been actually embroidered or worked with free spools it is necessary to follow out a number of individual threads.

This has been done in all cases when the work has been described as embroidered, and it has been found that although working threads generally end at the lowest point other threads have been worked downwards in a vertical and oblique direction first and then upwards again in an oblique line, a method only possible if a needle has been used. One motive from cloth 35.906 (fig. 19) has been enlarged to show the actual stitches (fig. 7).

The ends of all threads are cut off very closely to the cloth and may be either on the right or wrong side, and as the work is extraordinarily well stitched it is sometimes extremely difficult to find where any pattern begins and ends. Both back and front of the work appear alike, although the slanting stitches which carry the thread below the next row of weft usually appear on the wrong side. This form of good workmanship, namely the reversible quality of the pattern, is characteristic of the finer work amongst more civilized Eastern peoples, such as the Chinese and Japanese.

Fig. 7. Bird motive, *burong kaki panjai*, "bird with long legs", on an embroidered coat, showing the direction of the stitches, 35.906. See also bottom row of fig. 23, n.

The tapestry method or weft-mosaic.

This method of forming patterns on a bare warp with a needle is of wide-spread occurrence; it is found in old Peruvian work and was used in Egypt at least 1500 years B.C. (L. E. Start, 1914, pp. 14, 15). The needle carrying any particular colour darns that thread backwards and forwards over any special series of warps until the little design is completed.

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Thus the black thread at the top right-hand corner of fig. 8 wraps the third bundle of warps four times, then passes under the second and back over the top of it, under the third and over the fourth bundle. It turns back under 4, goes over 3 and under 2, turning back over the top of it to repeat the previous row. In this manner, which is like darning, the black triangle is completed. As each little bit of the pattern is worked separately it forms a kind of weft-mosaic, and as long as the bulk of the work follows an oblique

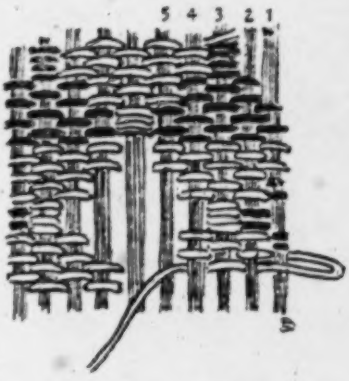

Fig. 8. Tapestry method of needle-weaving or weft-mosaic. Part of the central flower in the badge of 35.903.

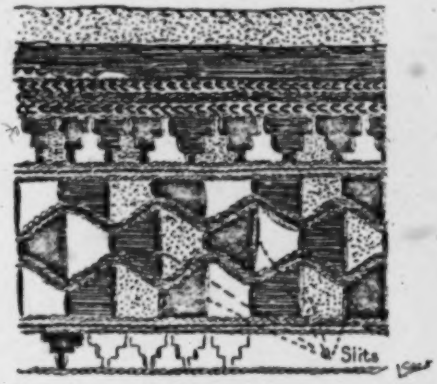

Fig. 9. Needle-woven pattern showing slits. The badge of *kalambi* 35.910.

outline it is firm, but if long vertical lines occur a gap appears in the work, just as it does in actual tapestry weaving, and this has to be sewn up at the back (fig. 9). This method is described variously as the tapestry method, needle-weaving, and weft-mosaic; the diagram (fig. 8) is a part of the central flower in the badge at the back of cloth 35.903. The unfilled lozenge in the centre would be filled in with red in the same way after the black and white triangles around were completed, or the process could be carried out in the reverse order and the central lozenge be worked first.

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

The brocade method

This name has been used because the effect produced is like that of brocade or patterned damask weaving, the pattern being the result of an unbroken surface of weft threads filling the desired shape and passing behind the web between the patterns or else carrying on between them as tabby weaving.

Gold and silver threads are usually used as weft by the Iban when they adopt this method of working a badge at the back of a coat, and the weaving is done whilst the warp is stretched in the loom.

A small spool is used to pick up those warps where the gold is not required to show and passes over the top of any number where pattern is wanted on the surface. Gold thread will not stand much handling because of the possibility of stripping the thin metal from its core of silk or cotton, and as each row is picked up individually there is no great strain on the weft, but the resulting cloth is of a very loose texture.

The simple pattern of lines and lozenges illustrated (fig. 24) in the section on *kalambi* has been carried out in this way. There does not seem any evidence that special weaving contrivances, such as pattern laze rods, have been used for these brocade patterns, and the process, in any case, is much quicker than that of the tapestry method.

Weft manipulation to form pattern

One of the most effective and commonest variations produced by means of the spool is that of "twining", which frequently occurs at or near the beginning of a blanket cloth and is also used as decorative lines in the badges (figs. 10, *a*, *b*, 15).

Two spools are used at the same time and the warps are usually bunched. In fig. 10, *a*, where a white and a black thread are shown, it is quite easy to follow the working. Beginning with the white spool, it goes over, whilst the black goes under the same bunch of warps, and before proceeding to the next bunch the spool threads are crossed, then the black goes over and the white under the next bunch of warps before the spool threads are crossed again. In this way a line of alternate black and white stitches having a rope-like or twisted effect is produced, and if two such lines are worked in opposite directions the effect is that of a black and white plait (fig. 10, *b*).

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

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Another way in which a different colour effect is produced is by means of weft stripes, and one example is enlarged in fig. 10, *c*, where the warp ends are first grouped into fives by means of a row of twining and then a shed is made of three and two warp ends alternately, through which there are first two picks of black and then two of red. A single pick of the ordinary weft then takes up the two groups and goes over, under, over the ends in the three groups right across the cloth, and this is followed by two picks of black through a shed similar to the first.

In the *kalambi*, *sirat* and girdles occasional weft stripes occur which may be either worked with a needle or woven by a spool; the needle would be the easier, as no new shed would have to be made.

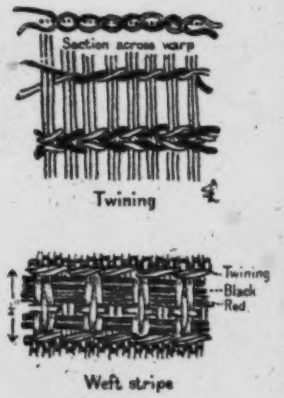

Fig. 10. Weft patterns.

Weft-patterned cloths

The Iban occasionally make use of a Malay loom or *tenjak*, and by means of a series of heddles and treadles set up in a suitable framework produce weft-patterned cloths, but these are rare and are not represented in our collection. When this type of loom is used the pattern itself loses its naïve quality and becomes a regular all-over design based on geometrical forms.

The patterns generally produced by this method are much more akin to Malay and Chinese designs than any produced by the warp-dyed method.

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113 Iban methods of spinning and weaving fabrics, the apparatus employed and some finished cloths are given by the following: Ling Roth, 1896, I, pp. 29–54, with numerous illustrations; 1918, pp. 65–70, with illustrations. Other Indonesian looms are described.

J. A. Loeber, Jn., 1903, pl. III, 4, *tangga ubong*, Sarawak (British Museum, no. 1896.3.17), pl. IV, weaving, Saribas Dayak (copied from Beccari, 1904, fig. 13), pl. XIII, 1, "Geïkatte schering", pl. XIV, an Iban *pua*, pl. XIV, 1, an Iban *pua* (British Museum, 96.7); other Indonesian methods and fabrics

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

386 463 usual fee being a small jar (*tepayan*), a sacred stone (*plaga*), a small bell (*grunong*), and a brass ring (*chinchin tembaga*). Some of the 'professors' affirm that they learnt the art from the fairy goddesses such as Kumang, Indai, Abang, etc. With some Sea-Dayak tribes they even go so far as to make offerings to these goddesses, asking their help in the difficult work of dyeing the cotton red (*ngar*, or *nakar ubong*). The woman who undertakes this particular kind of dyeing, first of all gets a piece of steel which she bites in order to strengthen her soul. This steel is called *kris samengat*. They make a great deal of fuss over the work of laying out the thread on the platform (*tanjeu*) and the business of it is called the *kayau indu*, or 'warpath of the women'."

"The Sea-Dayak bachelor in order to win the affections of a maiden must needs get a head first, similarly the Sea-Dayak maiden to win the affection of a bachelor must needs be accomplished in the arts of weaving and dyeing."

In the following pages we describe the specimens in the Cambridge Museum in the order of *kalambi*, *bidang*, *sirat*, *bedong*, *dangdong* and *pua*.

KALAMBI, JACKETS

291 286 The *kalambi* or jacket is a garment worn by both men and women; the former, however, only use it on full-dress occasions, when a *dangdong* or shawl is also thrown over the shoulder. The women do not usually wear a jacket when in the house, the *bidang*, or petticoat, and *rawai*, or corset of brass rings threaded on ratan circles, alone being worn; they don the jacket for out-door pursuits or for special occasions.

The men's and women's jackets are alike in material and shape except that the women's is usually a little longer. The jackets are made of bark-cloth or woven fabric; the latter type only is here described.

291 386 X 531 The method of weaving is exactly the same as for the *bidang*, and similar coloured stripes are introduced at the edges of the cloths, which average just under 20 in. (50·8 cm.) in width. It takes a whole length of cloth for a jacket with sleeves. If the garment is to be decorated with a badge at the back, this is worked on the warp threads before the cloth is removed from the loom (pl. xxvii).

7:Gomes M-5 (ca. 1890)1911 OC6 Iban OC6

[facing p.52]

GIRLS WEAVING

They are seated on mats on the floor. The threads are fastened to a frame, which is kept in position by a large band that is secured to the girl's waist, and she can tighten or loosen the threads by leaning back or bending forward. The threads of the weft are put through one by one from right to left and left to right.

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Two methods are used in the production of these badges, either a form of needle-weaving or weft-mosaic, or the brocade method. Both have been described under the heading "The making of patterns other than warp-dyed" (pp. 15, 17). 291 286 531X

Pure embroidery is used as a means of producing pattern on some of the woven cloth jackets in addition to the badges. The elaborate designs frequently worked on bark-cloth jackets serve, however, not only for decoration but also as a strengthening device, as the stitching is mostly done in a horizontal direction in order to make the longitudinal fibres firmer (fig. 1). 291 531X

According to Mr Leggatt (Notes) "the dresses of the Sarebas are the best embroidered as they are the cleverest in all needlework".

Further ornamentation is also provided by the use of fabrics of foreign manufacture; English red and yellow flannel, Chinese printed cotton and silks, are used as narrow edgings to the badges and for making neat the cut edges at the front of the coat and the neck. Gold thread obtained from the Chinese and Malays is sometimes introduced in the working of the badge and also to a very slight extent in the pure embroidery; Brooke Low (Catalogue) says that "the *kalambi subang* manufactured by the Sarebas is of a finer and closer texture than any other and therefore more expensive. The thread of which it is wrought is procured from the Malays and is of a red colour". 291 531X 439

Fringes of beads or hawk-bells occur on some of the finer examples and a short twisted fringe of warp ends is left on others, whilst small tassels of coloured threads are occasionally used to make a neat finish to a side seam (fig. 18, *a*). 291 531X

Most of the *kalambi* are, however, made of cloth with a warp-dyed pattern, and those decorated with good omen birds are greatly prized and are worn on such important occasions as the beginning of house-building, and the first planting of paddy, whilst others with sacred birds have value as a cure for sickness. It is probable that these special uses of *kalambi* for ceremonial purposes have led to their more elaborate treatment. [755]

The Sakarang wear jackets without sleeves and some tribes have a striped cloth, that is, there are narrow warp-dyed stripes alternating with plain colour stripes across the whole width; see cloths Z. 2341, Z. 2342.

The cloth woven for jackets is nearly always firmer to feel and finer in texture than that made for the *bidang*. This is mostly due to the fact that the finer warps are used and the number may vary from about 100 ends an inch in a cloth of moderate quality to 272 in a finely woven one, and the ends

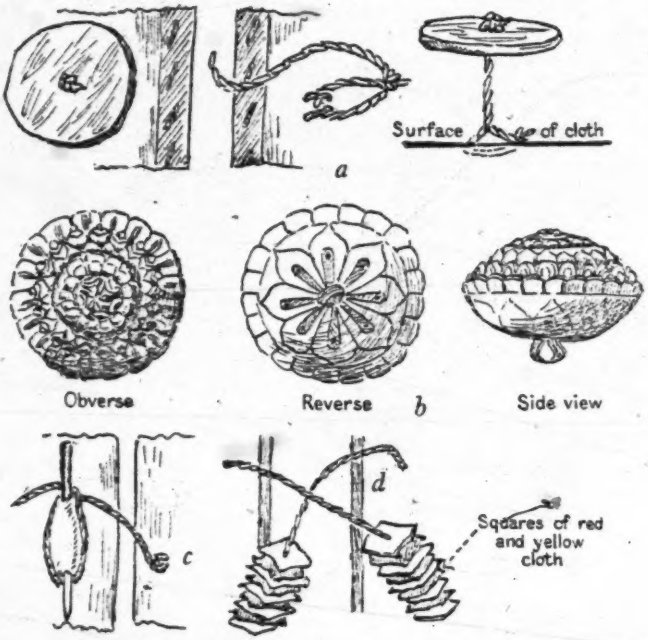

Fig. 11. Methods of fastening *kalambi*: *a*, wooden button and string, 35.911; *b*, silver-gilt button of local workmanship, 35.910; *c*, thorn and string, Sakaran Iban (Ling Roth, II, p. 32); *d*, two strings with ornamented ends, British Museum (No. +7010).

are usually paired or sister warps. Just as in the *bidang* cloths, where solid colour stripes appear it is usual to find more ends to the inch than in the main body of the cloth.

The weft is often threefold, occasionally four, and the strands are wound tape-wise on the spool. (The Javanese use a similar method of making a wide weft, as can be seen in the spool thread in a Javanese loom belonging to the Manchester College of Technology.) An average number of picks to the

291 inch is 22. The colour of the weft is often red and sometimes a dull white,
286 instead of the almost universal brown used in the other cloths.

In addition to the native yarns, some doubled white yarns, either imported or mechanically spun, are used, especially for embroidery and badges. The [439] gold and silver thread used in the latter, and less frequently as an embroidery thread, is obtained from the Malays or Chinese.

294 The method of cutting out and making up a *kalambi* with sleeves is given in detail for cloth 35.903. All jackets are made up in the same way, except that there may be a variation in the amount of slope cut away for the sleeve.

In making up, a lacing stitch or some type of open stitch is usually used for the sides (fig. 12, *d*), but a counter hem is the method adopted for joining the sleeve seams, which are always left open for an inch or two under the armpit.

The fastening of the coat may be a piece of fine twine attached to one side and wrapped round a thorn stuck through the cloth on the other edge (fig. 11, *c*), or it may be a button, varying from a beautifully worked silver-gilt one of native manufacture (fig. 11, *b*) to an European shirt button or a crudely shaped piece of wood (fig. 11, *a*).

Occasionally ties are made on either side of a coat consisting of twine. The ends of the ties may have a number of small squares of red and yellow flannel threaded on them (fig. 11, *d*).

The *kalambi* are described in the following order:

35.903	35.909	Z.2342	35.901
35.907	35.902	Z.2341	35.911
35.905	35.919	35.904	
35.910	35.908	35.906	

THE IBAN JACKET

291 35.903. A Saribas jacket. This cloth is a fine specimen of a *kalambi burong*,
286 "bird coat", with a badge worked in at the bottom of the back in the tapestry method, i.e. needle-woven upon the stretched warp.

Length of cloth before folding or sleeves cut from it about 6 ft. (182·9 cm.); width varies from 19½ in. (49·5 cm.) to 20 in. (50·8 cm.).

294 The manner in which the coat has been cut from the length of cloth is best seen in fig. 12, *a*, which shows how the front width is divided for the

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294 edges thus produced are joined by a coarsely sewn counter hem, i.e. each edge is turned under once and the raw edges, being placed upon one another, the folds on either side of the garment are felled or hemmed down (fig. 12, *c*). Openings are left under the armpit both in the sleeve seams and the side seams of the jacket, which are joined by a lacing stitch worked from side to side with a cord-like thread made from pineapple fibre (fig. 12, *d*). The sleeves are seamed on with the same material and all the remaining raw edges of the garment are bound with narrow strips of imported scarlet flannel, secured by a coarse tacking stitch (fig. 12, *e*) or in some parts by a hemming stitch.

286 X531 The material used in making the garment is an excellent example of warp-pattern dyeing. Groups of coloured warp stripes (fig. 13, *a*) in red, yellow, black, white, red, white, black, yellow, red, amounting in all to a compound stripe $9\frac{1}{16}$ in. (23 cm.) wide, separate the patterned stripes (fig. 13, *b*). The latter vary in width, being alternately $\frac{5}{16}$ in. (8 mm.) and $1\frac{1}{16}$ in. (2·6 cm.); there are 88 to 132 warp ends to the inch, grouped in twos and threes, and 20 to 22 picks of weft, each of which consists of three parallel threads.

In the coloured warp stripes which

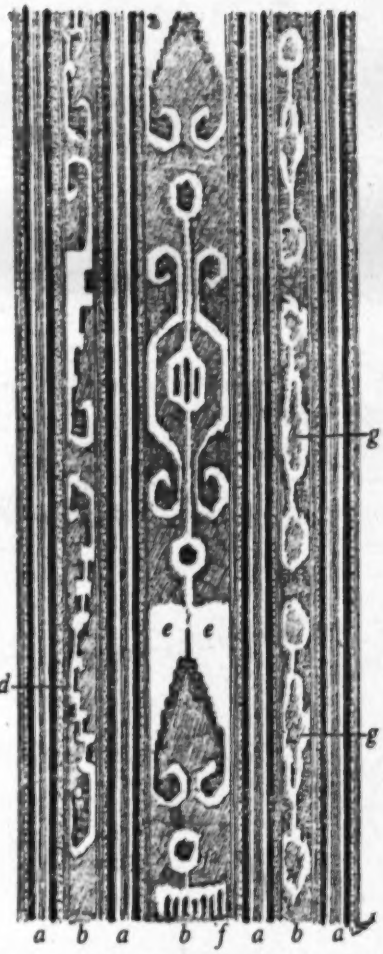

Fig. 13. Pattern repeat on back and sleeves of *kalambi* 35.903: *a*, solid colour stripes; *b*, pattern stripes; *d*, *daun uri*, "leaf of ratan" (see pl. XXII, *m*); *e*, *sayap burung lelayang*, "wing of swift, *Collocalia fuciphaga*"; *f*, *sugu*, "a comb"; *g*, *lachan*, "the green grass lizard".

give a solid colour effect the cloth is of a still closer texture, because the warps are grouped mainly in fours instead of threes and there are as many as 176 ends to the inch; this greater closeness of texture enhances the colour effect.

The patterned stripes have white motives (undyed yarn) on a reddish brown background, the dye being obtained by the Saribas women from mangrove bark; parts of the designs are emphasized by deep sepia brown obtained by a second dyeing of indigo over the red-brown.

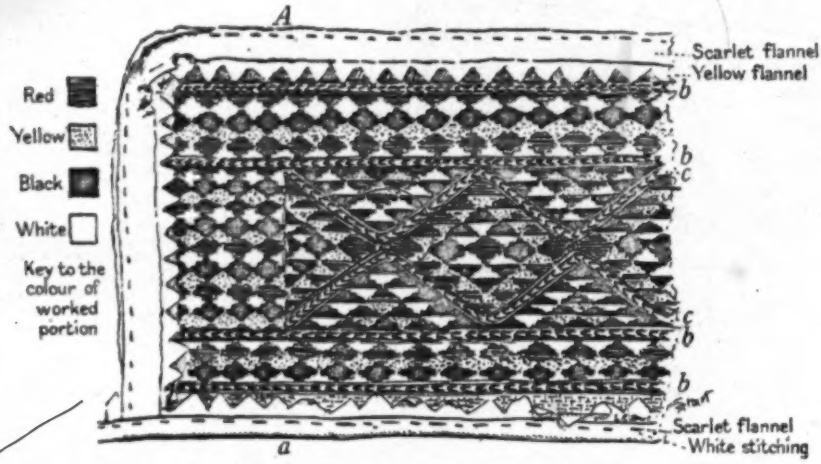

Fig. 14. Badge at the bottom of the back of *kalambi* 35.903, worked in the tapestry manner on the bare warp.

A portion of the repeat on the back and sleeves is shown in fig. 13, which represents: *d*, *daun wi*, "a ratan leaf" (pl. XXII, *m*); *e*, *sayap burong lelayang*, "the wing of a swallow or swift"; *f*, *sugu*, "a comb" (pl. XXIV, *g*); and *g*, *lachau*, "a green grass lizard" (pl. XII, *f*). At the bottom of the front of the coat is *burong buah bangkit*, "bird with the *bangkit* fruit" (pl. VIII, *a*).

Stripes of various colours are termed *ara* and these particular ones are labelled *ara ular kendawang*; *kendawang* is "a snake, *Cylindrophis rufus*, with a red head and a red tip to its tail, body striped black, white and red. It is said by the natives to be poisonous" (*S.D.D.*). Two broader stripes are

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abelled *ara belambang*. *Ara* also signifies "spread out", which is robably its meaning in this case; *belambang* means "irregularly", which adequately describes these two stripes, as some of the colours are broader than others.

The interesting badge (fig. 14) at the back of the jacket has been produced by needle-weaving and has been worked in upon the bare warp while that was still on the loom. The colours used, red, white, yellow and black, are indicated in the figure, which shows one-half of the badge.

The warp threads are grouped into bundles of about fifteen by the first two rows worked. The long parallel horizontal and curved lines of the design at *b* and *c* (fig. 14) are worked first, the effect of slanting stitches and an alternating black and white plait being obtained as shown in fig. 15 where the black thread shows the first row of stitches and the white the returning row. It will be noted that the threads cross one another alternately with the warp secured between them, as in twining, so that the wrong side is just the reverse in colour to the right. Four rows of stitches would be necessary to produce the effect of the plait in the figure, or two needles might be kept working alternately and the result produced by two rows of work. After the completion of these long lines the intervening spaces are filled in with lozenges and triangles in red, yellow, white and black, each motive being completed before the next is begun. The stitch used is like darning; an enlarged detail is shown in fig. 8.

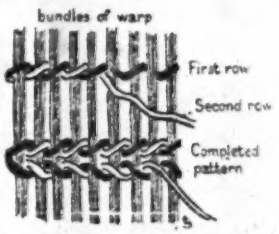

Fig. 15. Plaited or twined lines in badge, 35.903.

As will be seen from fig. 14, the pattern is one which, consisting chiefly of slanting lines, does not exhibit the usual weakness of the tapestry or needle-weaving method, i.e. gaps such as are produced when vertical lines are worked, except at the ends where variation of the central design has caused a long open slit *A–a*. This has been joined afterwards by string, the lacing stitch used for the side seams being the method adopted. The whole badge is surrounded by a vandyked border of yellow woollen material, *keselat lilit* ("*lilit*, gold embroidery on the edge of a handkerchief", *S.D.D.*), edged with scarlet flannel, secured by coarse white

running stitches. The yellow and scarlet flannels are foreign and probably of British origin. 531X 291

The central pattern of the badge (fig. 14) is labelled *pantak lelambak*, "wasp and flower pattern" (pl. XVII, *f*); it is enclosed within two zigzags called *lelingkok kelalin lantai*, zigzag interlaced bamboo. The black and white border within the triangles caused by the zigzag are labelled *dabong betangkal*, serrated notch (pl. XXIV, *l*). The upper border is labelled *lalat tisik tengiling* (which appears to signify a fly scraped off the scales of a *Manis javanicus*) and the lower border, *dabong telik leka labu*, serrated seed of gourd, *Cucurbita lagenaria*; perhaps the hour-glass-like red and black lozenges represent a constricted gourd, but *leka* signifies seed, grain. 286

A *kalambi burong* is considered one of the best kinds of jackets to possess, as many of the patterns symbolize ritual birds, possessing some special protective virtue. 291 531X

The Iban are great observers of omens, always consulting them before beginning any important undertaking. The bird omens are the most numerous and important; the omen birds are supposed to be the sons-in-law of Singalang Burong and come from the spirit world as his messengers. 787

35.907 A *kalambi burong*. A striped cloth jacket similar in construction to the bird coat previously described has an analogous badge at the back, but the dyed designs and details of decoration are different; they consist mainly of birds. 291 531X 286

The warp is grouped in threes in the solid colour stripes and in pairs in the patterned ones and averages 148 ends to the inch. The weft is brown and three threads are carried across each pick, tape-wise or parallel, having been previously wound on the spool in that manner.

The coat is bound round the edge with red flannel as in the previous cloth, but it and the badge at the back have also a bordering of a narrow white braid of European make which is usually used in Europe as a foundation for crochet work. Probably the chief value of the braid lies in its zigzag pattern, which was produced in the previous coat by snipping pieces out of the edge of the woollen material; further ornamentation has been added to the braid in the shape of a little looped stitch or picot (fig. 16, *b*), worked either in green or indigo.

A charming addition to the red border at the back is a hand-made braid

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with a gold weft and a small scalloped edge. The braid is composed of purple, yellow and white warps brightened by the faint glisten here and there of the weft. In weaving the braid, three spools, each carrying two gold threads, appear to have been used in rotation, the thread being interlaced at the edge (much in the same way as baskets are often finished) and forming tiny

Fig. 16. Details of badge braids of *kalambi*, 35.907.

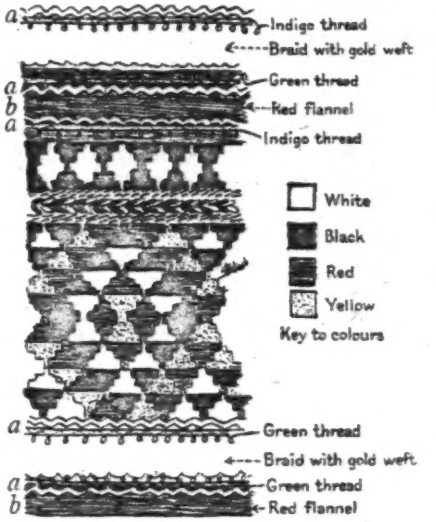

Fig. 17. One repeat of the pattern worked on a badge of a *kalambi*, 35.907, by the tapestry method, with added borders.

scallops. The method of interlacing is drawn in fig. 16, *a*. The native name for the braid, *lilit*, signifies "gold embroidery" or "to warp or bind with gold thread".

A single motive of the pattern in the badge is drawn in fig. 17; there are 11 complete and one partial repeat of this in the width of 17⅛ in. (43·5 cm.). The design is executed in red, white, yellow and black in the needle-weaving or tapestry method; the similarity of the pattern to that in cloth 35.903 is noticeable and possibly indicates that the original owner was a Saribas Iban. At the top of the badge is a band of white stepped lozenges on

a black ground; it is labelled *dabong igi labu*, serrated seed of gourd. The black and white band between this and the broad band is labelled *kelalin lantai*, interlaced bamboo. The double zigzag of the broad band is called *dabong lelingkok*, the triangles are labelled *lalat dabong lancham*, fly, serration or dog-tooth, pointed; the central designs are termed *lalat ketupang lensat*, (*lalat*, fly, *ketup*, to bite; *lensat* is a "fruit-bearing tree, *Lansium domesticum*", *S.D.D.*); this appears to mean a fly biting *lensat* (fruit).

The patterned stripes measure ⅜ in. (1·9 cm.) and ¼ in. (6 mm.) alternately and are divided by compound solid colour stripes in the order: red, orange, indigo, white, indigo, orange, red, each ⅜ in. (1·6 cm.) wide and intended as a whole to represent the black, white and red bands of the *kendawang* snake (*Cylindrophis rufus*). The composite stripe is labelled *ara surik kendawang*, see p. 29. Amongst the birds figured in the broader patterned stripes are: *burong betampong*, "a ceremonial bird which cures sickness" (pl. IX, *d*); *burong bekarong*, "a hidden bird", similar to examples on pl. VII, *i–k* and *burong sawang prut*, "a bird with a hole in its breast" (pl. VII, *g*). All the narrower patterned stripes contain *daun wi*, "ratan leaves", very similar to those drawn on pl. XXII, *l*, *m*.

About two-thirds down the front of the jacket there occurs in all the patterned stripes a very interesting blurred design, which consists of a brown blank space with an indistinct lighter smear in its middle; above and below is an irregular wavy line (fig. 18, *b*). This is labelled *kengkang lang*, the striped kite: "the kite, according to Dyak belief the bodily shape and form of *Singalang Burong*, the Bird King, who, upon one occasion only, appeared on earth in human form but has since adopted the shape and form of the kite" (*S.D.D.*). The formless mass may be a naïve way of acknowledging the impossibility of depicting the Supreme Being.

35.905. A bird coat. This old "*Baju burong*" probably belonged to a Skarang Dayak, as some of the names of designs used are given in that dialect; and it is not so well finished as other examples of similar coats, having no badge or flannel binding. The side seams are joined by a form of blanket-stitch worked from side to side (fig. 18, *a*), which when closely done looks like the backbone of a fish and so is called *jayit tulang ikan*. Three little tassels, *kelapong leka*, made of the coloured warp thread finish off the end of the seam (fig. 18, *a*).

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291 The warp is paired, with odd groups of three in the coloured stripes, ●286 and there are 112 ends to the inch; the weft is threefold and there are 22 picks to the inch.

291 The patterned stripes have a brown background with white motives and ×531 these are separated from one another by grouped warp stripes of red, yellow, brown and white, which vary in width from $\frac{1}{8}$ in. (9 mm.) to $\frac{11}{16}$ in. (1·7 cm.).

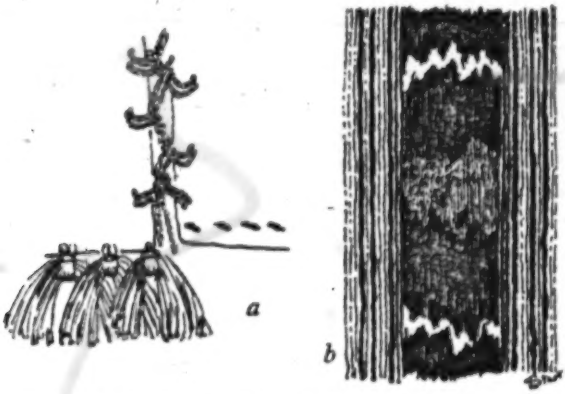

Fig. 18. Details of bird *kalamli*: *a*, tassels at end of seam, 35.905; *b*, *kengkang lang*, 35.907.

The narrower of the vertical patterned stripes have repeats of *anak lachau*, young grass lizard, similar to pl. XII, *a*; they are separated by variously coloured groups of, or compound, stripes, *surik rinik*, from the stripes decorated with birds, such as *burong bekarong*$_2$ "covered or concealed birds" (pl. VII, *j*); *burong enchoyok* (*tinggang ujan*)—the words in brackets indicate that this *burong* is associated with falling rain (pl. IX, *h*, and *g* seems to be a variant); *burong buah bangkit*, "bird on *bangkit* fruit". The designs on the front of the jacket also include *kengkang lang*, "striped kite". At the bottom of the back of the jacket are designs labelled *lancham pemuchok tubu*, "pointed bamboo shoots", pl. XVIII, *g*.

In giving names to the patterns on this cloth the owner described it as *satu macham bekarong samoa*, "a good kind to cover anyone", and also said *enggo lachau samoa*, "to wear a lizard all or everyone". The grass lizard is one of the lower rank of omen animals.

35.910. This is a well-made typical *kalambi* bound at the top with a narrow and at the sides with a broad band of red flannel. The lower edge has a strip of red and of yellow flannel and about 2½ in. above this are similar strips. At the collar is the silver-gilt button shown in fig. 11, *b*. 291 531X

Among other devices in the broader vertical stripes are *burong burak*, "bird with a white breast"; *burong bekinkiang*, crooked *burong*; *burong pemiyaiarbong*; *burong trugu* and *langkiang*, a lizard with a long reflexed tail. The narrower stripes contain lizards, ratan, and other devices usually found in such stripes. A prominent feature in this and the next jacket is the occurrence of *kengkang lang* in the centre of all the vertical stripes on the front of the jacket. The badge is illustrated in fig. 9.

35.909. This is a new *kalambi* which apparently has never been worn, and there are no labels attached to the patterns. Stripes composed of two black lines edged with white in a rather broad red band separate the broad stripes containing birds from slightly narrower stripes in which are thick white zigzags with black spots. On the lower border of the back is a band or badge of chequer-work: yellow bands slope in one direction and red bands in the other; where they cross each other is a black square, the interspaces being white. Above this is a horizontal row of coarse double twining in brown and white.

35.902. On the body of this man's jacket there are self stripes in the colours of the *kendawang* snake, dividing patterned ones filled with birds. At the bottom of the back two rows of coarse double twining in black and white, about an inch apart, are outlined by and enclose a sparsely worked lozenge pattern done in gold thread.

35.919. This is a piece of cloth 8 ft. long made for a *kalambi* with sleeves, just as it is when taken off the loom. The photograph (pl. xxvii) shows only one-quarter of the length, but it will be seen that the length is continuous as the warp ends joining the part where the badge has been worked in and those of the other end of the cloth are uncut. Fragments of a thin strip of bamboo, used as a laze rod (fig. 4), still remain near the beginning of the pattern and can be seen near the bottom of the photograph. Below the needle-woven badge are two coarse threads which have been used to group the warps for the stitchery. The cloth has self-coloured stripes of white, scarlet and yellow alternating with patterned ones. 291 531X 286

291 X531 The part of the cloth photographed (pl. xxvii) shows the variously coloured stripes, *surik ular kendawang*, which separate the alternate rows of *burong burak prut*, "bird with white breast" (cf. pl. vii, *e*), and *lachau*, "green grass lizard" (cf. pl. xii, *a*); the *lachau* are found only at the ends of the cloth, throughout the greater part of its length being replaced by *daun wi*, "leaf of ratan" (cf. pl. xxii, *k*). At the extreme ends of the cloth below the *burong* are designs which on other cloths are labelled *pemuchok tubu*, "bamboo shoots", perhaps with the head of a locust on the top of the shoot. At the top and bottom of the badge is a very narrow border of two yellow stripes separated by black and white spots; this is called *kelalin lantai*, interlaced cane; two similar horizontal borders separate the main patterns of the badge. The upper and lower patterns consist of a series of white and black triangles separated by a row of red and yellow triangles; they are labelled *lalat dabong igi labu*, fly, serrated or dog-tooth, seed, gourd. On other parts of the cloth are *burong lelayang*, swallow, *burong mansau prut*, "bird with red breast", *daun entibap*, "(isolated) leaf of the *arenga* palm" (see pl. xxii, *a–e*). The *kengkang lang* (p. 33) is especially prominent. The broad central pattern has two zigzags, *lelingkok kelalin lantai*, zigzag interlaced cane, which divide the band into triangles and lozenges, which are filled up with white, yellow, red and black triangles, all the last having a gold thread centre; within the lozenges are black designs enclosing red and yellow triangles; these are labelled *buah belimbing*.

291 286 35.908. This is a jacket of somewhat unusual colour; its edges are bound with red flannel, and there is no badge on the back. Width, 21 in. (53·4 cm.); length from shoulder to hem, 22 in. (55·9 cm.).

The warps are paired throughout the cloth except in the pale brown and yellow self stripes, where a coarser yarn has been used in the former, the latter being crowded together. There are 60 groups to the inch, i.e. 120 ends and 24 picks of weft to the inch.

291 X531 The background is dark red in tone with patterns in light brown with darker markings of red and dark brown. There are two narrow patterned borders at the sides of the cloth, each divided from the other and from the central pattern by coloured warp stripes representing the snake, in red, yellow, black and pale brown, repeated twice.

On the front of the jacket are *aji*, shrews, and the back is covered with

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ones of gold thread and the central one of white and red thread. The designs, which reproduce patterns plaited (*anyam*) in mats, are worked in the brocade method, i.e. the weft threads being loosely carried across the back of the cloth until needed to form a portion of the pattern.

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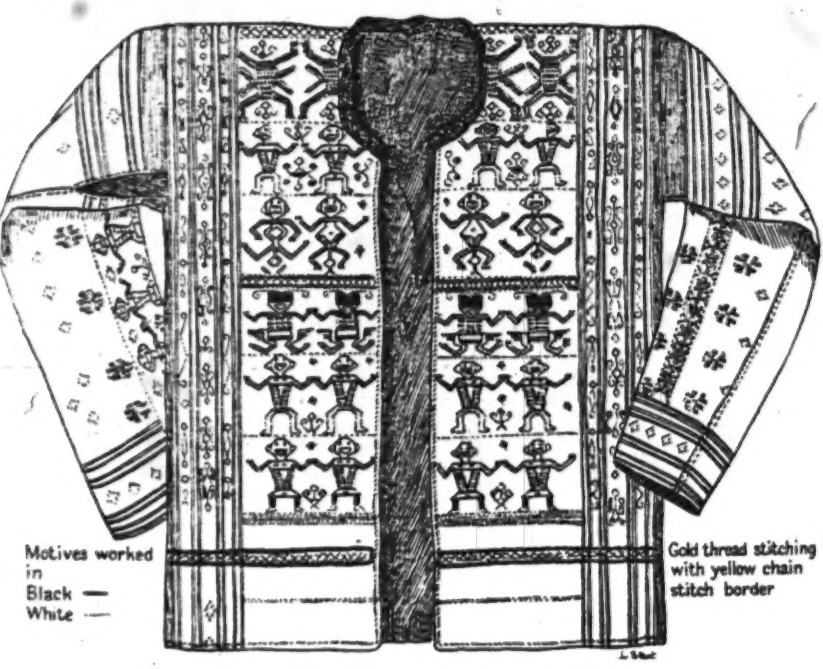

Fig. 19. Front of an embroidered *manang bali kalambi* 35.904.

At the bottom of the badge there is a fringe of black and white beads; the beads are threaded on the warp ends, which are then finished off with a knot.

The neck of the jacket is bound by printed cotton of foreign manufacture.

The cloth of which the jacket is made is, as usual, one with a warp surface, in which there are 180 to 204 ends to the inch, grouped in threes. There are

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26 to 30 weft picks to the inch, but as three parallel, untwisted threads are carried by the spool, there are really about 90 weft threads to the inch.

The chief interest of the coat, however, lies in the patterns and their meanings.

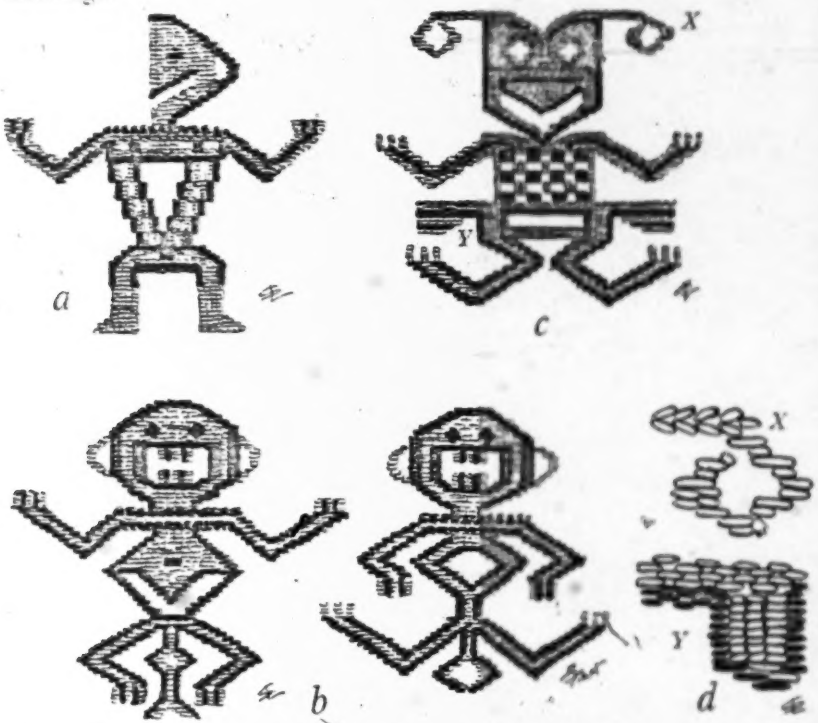

Fig. 20. Anthropomorphic designs on front of *manang bali* jacket 35.904: *a*, second row, figure with half a head and no teeth, see fig. 22 *a*; *b*, third row, presumably these male and female figures are *engkaramba manang bali*, "a *manang* who acts as a woman"; *c*, fourth row, *balu menyagu*, "widower"; *d*, enlargement of parts of *c* showing arrangement of stitches.

The figures in the top row of the front of the coat (fig. 19) are labelled *kengkang kelabong*, this may be translated as striped scorpion. The human figures in the second row (figs. 20, *a*; 22, *a*) are very similar to those in the fifth and sixth rows, except that in the sixth row the legs are

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The number of warp groups to the inch varies from 60-74, averaging 272 ends in all the stripes except the white, where they are in pairs and there are 44 pairs to the inch (88 ends). [786] 291 531 X

The weft is red throughout and consists of a bundle of four, six or eight threads slightly twisted, and there are on an average 22 picks to the inch.

The motives which embellish the garment are embroidered in white and black, with the occasional addition of gold thread, usually in the form of a spot. They are entirely different from those on any other coat in the collection, as can be seen in fig. 23, which shows the front and back of the garment.

A B

Fig. 23. A, front and B, back of a *kalambi*, 35.906, with woven stripes and embroidered designs. Fig. 7, p. 15, is an enlargement of a *burong kaki panjai* in the last row of B. The badge (fig. 24) is worked in the brocade method with a gold thread weft.

On the front two isolated, *tabor*, motives appear, the cruciform one representing a flower, *bungai*, rather like pl. XXII, *i*, and, around the flower, four spots, *bintang*, "star", which are worked in gold thread. On the back, taking the figures in the broader stripes in order from top to bottom, the first represents a frog, *engkatak* (pl. XIII, *e*), the second a concealed bird, *burong bekarong*; the third a scorpion, *kala* (pl. XVII, *a*); the fourth a concealed bird slightly different from the previous one (pl. VII, *k*); and the fifth, *burong kaki panjai*, a "bird with long legs" (fig. 7). In the narrow vertical stripes there are three other motives, the upper three of each stripe, the lizard, *lachau* (pl. XII, *a*); the fifth down the stripe is the leech, *lintah* (pl. XVI, *h*), and the last represents ratan leaves, *daun wi*

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The piece of cloth for a *bidang* may vary in width from just over 16 in. to nearly 2 ft. and the length from 3 ft. 6 in. to 4 ft. 3 in. The average length of 30 petticoats taken at random from a group of 40 was 3 ft. 8¾ in. and their average width just over 20 in. 291

BIDANG CLOTHS

The cloth used for *bidang* is generally very firm and extremely hard wearing, the yarn used being firmly spun although it varies greatly in thickness, an average section being 0·25 mm.

The yarn used for the warp colour stripes, which form borders at the top and bottom of the petticoat when in wear, but which being warp threads are really parallel with the sides of the cloth, is usually finer in section than that in the patterned part of the web. These coloured yarns are dyed in the hank before being set up in the loom with the patterned warps. The bright reds used by the Saribas Iban are usually the finest, averaging from 0·15 mm. to 0·2 mm. in section, whilst the pure white sometimes used in the border stripes is the coarsest, reaching 0·5 mm.

The white thread is the only yarn in any of the cloths which is used "doubled" in the accepted meaning of that term (i.e. two threads which are twisted upon one another) and for this reason and the fineness of its bleaching one might suspect it to have been an importation, although the twist in the single thread and the quality of the cotton fibre itself indicate native origin. It may be that the fibre is native but has been spun and doubled mechanically, instead of by hand, which would mean that the yarn was not produced by the weaver of the cloth as is usually the case. 286 ● 291

The warps in cloths intended for *bidang* are nearly always grouped for the purpose of weaving, being usually arranged in pairs (the threads remaining parallel) or threes, though four in a group occur occasionally in the self-colour stripes, where there are usually a greater number of warp ends to the inch (fig. 27, *a*). Taking a series of 30 cloths it was found that the average number of warp ends to the inch in the self-coloured stripes was 147, whilst in the patterned ones it was only 116; this shows that the fabrics are usually more closely woven at the sides than in the centre. The close weaving of the plain colour stripes enhances their value aesthetically.

In the same set of cloths the grouping of the warps for the borders was

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19 pairs, 7 threes, 2 fours and 2 singles; whilst in the patterned portion the grouping was 24 pairs, 4 threes and 2 singles. A detailed analysis of 30 of these cloths is given later.

As the upper and under webs are tied together in arranging the pattern when on the tying frame, this analysis of the grouping of warps means that it is usual to tie up four threads, although on occasions the number may be eight, six or two.

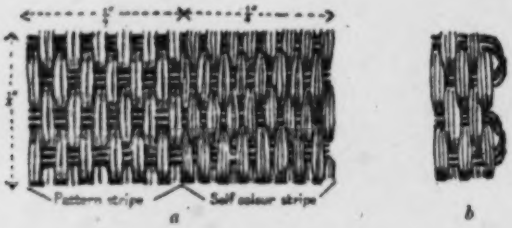

Fig. 27. *a*, Proportions of weft visible when warps are paired and grouped in threes; *b*, three parallel weft threads turned at the edge of the cloth.

The average number of weft picks or shoots to the inch in 30 cloths made for *bidang* and *kalambi* was 21·8, practically 22. In winding the weft on the spools two, three or four threads are wound at the same time and kept quite flat like a ribbon or tape, so that in passing the spool from side to side a series of parallel weft threads is carried across, an arrangement which usually makes the weft broader in section than the warp.

In the group of cloths under consideration 10 had two parallel weft threads in each pick, 11 had three, 4 had four and only 5 were single weft threads. An example with three, showing the crowding of the warps in the plain colour stripes and the turning of the weft threads at the edge of the cloth, is given in fig. 27, *b*.

The weft is usually brown in colour, either reddish or a dull vandyke shade.

The weaving itself is of the simplest type, one group of warp threads being picked up and left down alternately by the spool in passing.

The width of the weft and the large number of warp ends as compared with weft picks result in the production of a cloth with a rep or poplin weave,

in which the warp threads form the surface, and as they had been previously dyed after the pattern portion had been reserved by tying up, they produce the desired pattern.

The average width of 30 *bidang* cloths is 1 ft. 8 in. (50·8 cm.) and the average length 3 ft. 10 in. (116·9 cm.), and according to Mr Leggatt it takes several months to dye and weave a piece of cloth 45 in. in circumference, i.e. a length of 3 ft. 9 in. which has been joined by sewing.

ARRANGEMENT OF THE PATTERNS AND GENERAL COLOUR EFFECTS

Most of the *bidang* have a broad central band elaborately decorated with patterns. These patterns appear as designs in stone or buff colour against a background which is a reddish brown in most cases, but occasionally the whole of the warp for the patterned stripe is dyed a light brown first, in which case the patterns appear as light brown.

The reddish-brown ground commonly used is sometimes varied in small patches by being re-dyed in indigo so that it becomes a dark brown, almost vandyke, in those parts. Such variations usually indicate a highly skilled worker. On either side of the broad central pattern is a series of compound stripes, each composed of several narrow warp stripes of different colours. Often a colour consists of only a few warp threads, so producing the effect of a "pin stripe". Narrow patterned stripes are frequently used between these composite ones; three sets of border stripes are illustrated in fig. 28 and it will be noted that the self-colour stripes at the outer edges are often wider. In a large group of cloths (for *bidang*) they vary from half an inch to an inch and a half; sometimes there is one broad one, in other examples there is a series of three or four averaging half an inch each.

These broad self-colour stripes form a strong contrast with the quieter buff and brown pattern in the central band and provide a strong accent which is particularly pleasing in its effect.

One of the most popular arrangements of colour in the composite stripes is scarlet, black, or an indigo so dark that it appears black by contrast, and yellow; or scarlet, black, white and yellow. This arrangement is described as *ara surik kendawang*, "the coloured stripes of a snake", and is derived

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No. of cloth	Width	No. of warp ends to inch	Analysis of weaving in *kalambi*			Notes
			Description of warp	No. of weft picks to inch	Description of weft	
35.903	1 ft. 7½ in. (50·1 cm.)	88–132 ends (44 groups) 132–176 ends (44 groups)	Paired and threes in pattern stripes. Fours and threes in self-coloured stripes	20–22	Brown Three parallel threads	Pattern stripes have had three dyeings: light brown, deep red brown, indigo on red brown (vandyke)
35.904	1 ft. 7½ in. (48·8 cm.)	204 ends (68 groups)	Triple warps throughout Very fine yarn	26–30	Two spools used alternately and threads cross at edge of cloth. Three, occasionally four, parallel threads of finely spun yarn; red in colour	One of the most finely woven cloths in the collection. The warp and weft are both red except in the border stripes, when yellow and dark blue warps are used. The patterns are embroidered with a double thread of white or three threads of black
35.905	1 ft. 7½ in. (48·8 cm.)	112 ends (56 groups)	Paired, odd groups of threes in coloured stripes	22	Three parallel threads. Greyish white	Colour dull, a greyish white pattern on dull vandyke ground. The cloth is striped right across its width, pattern stripes being divided by groups of red, white and brown stripes
35.906	1 ft. 5½ in. (44·4 cm.)	272 ends (68 groups)	Four parallel ends in each group	22	Red. Four, six or eight threads with a slight twist which appears as parallel in the shed	A finely woven red cloth with solid white, black and yellow stripes at the sides. The patterns are embroidered in dark blue and white with a twisted or doubled thread for the white and a fourfold untwisted thread for the blue stitches
35.907	1 ft. 7½ in. (49·5 cm.)	112 ends (56 groups) 192 ends (64 groups)	Paired in the pattern stripes Threes in self-colour stripes	20	Brown. Three parallel threads	Pattern stripes of white with brown ground alternate with composite stripes of black, white, red and yellow, and extend right across the width of the cloth. Faded

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GENERAL CONSIDERATIONS

We now pass on to a brief consideration of the broader issues connected with the Iban cloths and begin with a quotation from Hose and McDougall (1, p. 244):

"We are inclined to suppose that the Ibans have copied many of their cloth-patterns from the Malays together with the crafts of dyeing and weaving. For their technique is similar to that of the Malays all over the peninsula, and the same is true of some of their designs. Only in this way, we think, can we account for their possession of these crafts, which are practised by but very few of the other inland peoples. The fact that plant derivatives predominate greatly over animals in their designs, whereas the reverse is true of almost all other tribes, bears out this supposition, for the Malays are forbidden by their religion to represent animal forms, and make use largely of plant forms."

We have quoted in full here and on p. 123 what has been written on the decorative art of the Iban (with the exception of tattooing) by Hose and McDougall in their authoritative book on Sarawak, but we venture to question some of their statements. It is true that the carvings and engravings of the male Iban show predominantly plant forms, and the textiles of the women depict predominantly animal forms. If the men were influenced by Muhammadan Malays, why were not the women? The Iban have not embraced Islam and there is no reason why their designs should be influenced by that religion, nor is there sufficient evidence that they have borrowed some of their designs from the Malays; what designs they have in common might as well be attributed to their supposed common ancestry. The vast majority of the decorative designs of the Iban are not only markedly different from those of other Bornean peoples but equally so from those of the Malay, and almost all are intimately connected with their environment, pursuits, or beliefs.

The technique of producing the pattern by tying up the warps before dyeing is used only in isolated cases in the Malay peninsula. Other resist methods are referred to later. The Iban loom is the simplest of the Indonesian looms and therefore is not likely to have been copied from the Malay type with its fixed frame, heddles, treadles and other refinements.

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We have now to consider to what extent the Iban owed this part of their culture to other peoples, or if there is any evidence to show that the technical methods employed and the majority of the actual patterns have developed within the period of time in which they may be considered to have been a separate people.

A comparison has been made by L. E. Start between the cloths from Sarawak and the technical construction and patterns of the cloths of the Chinese, Hindu, Malay, or other inhabitants of the Indo-Chinese peninsula, as well as those of Java, Sumatra and the nearer island groups of Oceania.

The method of weaving is mostly carried out by the Iban in the simplest possible way on the most primitive type of Indonesian loom, the *tumpoh*, for although a few Iban use a simple Malay loom, the *tenjak*, they usually produce only coarse work upon it and that apparently in very small amount. We have no example of this in our collection, nor is there one in the large series in the British Museum, or in the collections in the Bankfield Museum, Halifax, or the Castle Museum, Norwich. The bulk of the Iban cloths and all the skilled weaving of the warp-dyed pattern cloths are done on the primitive *tumpoh*; this supports Ling Roth's argument that "if the Ibans had learnt [weaving] from the Malays I think we are more likely to have found among them an imperfect or degenerate form of loom, rather than a more primitive one than that used by the Malays" (1918, pp. 71, 72).

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The patterned weaving in Europe and civilized Asia is based on employing coloured warp and weft threads, but this technique is lacking, or almost so, in Indonesia. There is one method of making designs on cloths in Great Britain and Europe in which the warp is printed before weaving and "shadow" patterns are produced. Cretonnes, linens, and silks may have "shadow" patterns.

In one technique in Indonesia the pattern is entirely developed before the actual weaving takes place and it is accomplished by tie-dyeing of the warp. This under skilful hands affords beautiful and elaborate patterns and it has a peculiar charm.

There are various terms for this tying technique in Indonesia. According to Loebèr (1903, p. 14) the Malay and Iban term *ikat* was first introduced into Europe by Prof. A. R. Hein (1890), who in 1901 turned it into a Dutch verb "ikatten". We suggest that the word "ikat" might be

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adopted in English for the finished product and "to ikat" for the technical process.

The method of producing patterns by tying-up the warps before dyeing is not in general use among the peoples of the Malay peninsula nor of those of southern China. The only account we have been able to find of the use of a similar technique is that by L. Wray (1902), who says that it is carried on to a limited extent by a few Malay women at Sitiawan in Perak. The fabrics are made of silk which comes from China in a raw state and is treated locally before dyeing.

The ikat method is nearly always used by the Iban and is carried by them to a degree of great excellence, but it is not confined to them in Indonesia.

Lamster (1929, p. 125) refers to the bold and effective ikat technique of the women of Sumba and Flores and to the delicately worked and beautifully tinted patterns of Roti, Savu, Timor, Alor and other islands. The art of ikat weaving is practised throughout nearly the whole of Indonesia. Two pieces of hempen cloth from Mindanao, Philippine Islands, in the Haddon collection in the Cambridge Museum also illustrate this technique.

The woof, and not the warp, is ikated on the silk fabrics of Palembang, south-east Sumatra, at Gresik in east Java, and in Bali. At Tenganan, a small mountain village in south Bali, and nowhere else in Indonesia, the warp and the woof are ikated, a very difficult technique that produces cloths, termed *kain gringsing*, of unequalled beauty; they are the most splendid and costly of Indonesian woven cotton fabrics. Their manufacture is associated with all kinds of precautionary regulations; it can be done only in secret and the girls or women must work naked. Formerly the cloth was dyed with the blood of a human victim: the blood of animals must not be used; now they employ the bark of the *kemiri* tree, *Aleurites triloba*, with shredded *Curcuma* (turmeric) stamped in water. On various important occasions a person (or a young couple) is engirdled with a *kain gringsing*, and one wrapped round a sick person ensures recovery. The designs are mainly plant motives. (Lamster, 1929, p. 126; Wirz, 1931.)

Loebèr points out that the material used for the tying is not unimportant. Winding cotton around cotton is ineffectual and the binding ribbon must be of some other material that takes the dye less readily than the cotton warp. The manner in which the warp is wrapped around is decisive for the

character of the decoration. The simplest type is found on Flores, whence Prof. Max Weber in 1888 brought back bundles of yarn in various stages of "ikat". Each skein is tied round at regular intervals, and consequently uncoloured rings appear after the dyeing. That at any rate is what it looks like on the skein; when this is wound off the rings disappear and each thread is furnished with regular white dots. After the threads have been stretched on the frame of the loom they naturally come into a different order and an irregularly dotted background results—the parts that have been "reserved" from the dye have shifted their position.

The patterns in all these cases are different from those of the Iban and frequently the workmanship is less expert. Illustrations of patterns made by these techniques are given by the Dutch authors quoted and by others.

In some parts of Indonesia there is found another entirely different method of resist-dyeing, which is accomplished by applying wax to the fabric at those places where the dyeing is not desired. This highly developed *batik* technique, by which beautiful and elaborate patterns are made, is especially characteristic of Java. An analogous wax technique is used in southern China and by some Malays.

There are other methods of making patterned cloths in Indonesia, but these do not concern us here.

When Iban patterns are produced by other means than warp-tying, whether by floating shuttles, the use of more heddles or shed sticks, or by embroidery, the quality of the work is more variable and the patterns themselves differ from those characteristic of warp-tying. These technical methods may have been adopted by the Iban from other peoples, and their own patterns made by these techniques have suffered modification through these alien influences.

Among all the cloths in England examined by us, not more than 1 per cent. of the patterns are like those of the Malay peninsula or the surrounding islands. The designs on our Bornean cloths have been compared by L. E. Start with traditional Chinese and Hindu designs, with those of the hill tribes of southern China, the Shan, Kachin and Burmese printed and embroidered fabrics, as well as with the resist-dyed fabrics of Java and Sumatra. With the exception of the occasional tendency to make a fret-like completion to a design, which does not necessarily prove anything, there

seems to be no outside influence in the style of the warp-dyed patterns of the Iban.

The motives chosen, with the exception of the crocodile, do not seem to be used by the other peoples mentioned. A strong argument against Malay influence is the predominance of animal forms, which are forbidden by Islam. The sources of the patterns themselves are all intimately connected with religious beliefs, daily life and environment of the Iban. The animals are those with which the island abounds, the plants drawn are in daily use and indigenous to Borneo, and the remaining subjects are connected with agriculture and other daily pursuits and domestic objects.

We would however refer to the ambiguous *gajah* motive (pp. 41–43), which certainly is not Bornean. It seems to us quite possible that it may be a dim relic of some higher culture that presumably had its origin in India, but we cannot pursue this conjecture further owing to lack of data. The correspondence between the spiritual personages of the Iban and those of Hinduism is discussed by the Venerable Archdeacon J. Perham (cf. Ling Roth, 1, pp. 181, 182).

It is a remarkable fact that the textile designs of the Iban women are quite distinct from the patterns carved by the Iban men on bamboo and wooden objects (see Haddon, 1905), and these are also very different from those carved by the Kayan, Kenyah, Murut and other peoples of Sarawak with whom the Iban come more or less into contact. These peoples do not practise the art of weaving to any extent and they do not make the patterns characteristic of the Iban women.

Taking all these points into consideration it seems reasonable to suggest that the traditional designs used by the Iban women in their textiles have been developed since the Iban became separated from other peoples, and thus the designs would be a native art peculiar to the Iban.

It has previously been stated (pp. 1, 2) that Dr Hose dates the migration to Borneo of the ancestors of the present Iban at less than three centuries ago. We wonder whether this highly developed technique could have reached such perfection within that period of time.

It is interesting to note that in some parts of New Guinea fibre skirts are tied in various places and dyed so as to produce horizontal stripes of a dark colour on the natural colour of the fibres. Loebèr (1903, footnote, p. 15)

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states that he saw, in Barmen in New Guinea, petticoats which had been dyed by this manner in three colours; probably one colour was the natural colour of the fibre. This method of resist-dyeing is probably an ancient one and doubtless will be found to have a wide distribution in scattered areas.

There are other methods of resist-dyeing in Melanesia in which the finished cloth is tied so as to resist the dye. Tie-dyeing of cloth is also practised in West Africa.

It does not appear unreasonable to regard the tie-dyeing of the warp of the cloth by the Iban as a development and refinement of the similar though crude technique now seen in certain fringe-like fibre skirts elsewhere. In the British Museum a fringe on a Konyak Naga *dao* (a knife-chopper) is of goats' hair with transverse bands of red dyed by this technique.

IBAN RELIGION AND ITS EXPRESSION IN DECORATIVE ART

A brief account of the personnel of Iban religion will help towards an understanding of some of the designs shown on the cloths. This is abstracted from Perham as quoted by Ling Roth (1, pp. 168–213).

The Iban believe in an indefinite number of spiritual beings termed *Petara*; these "gods" have their several functions. Some Iban say that there is only one *Petara*, but when confronted with the references to many gods in their incantations they explain this as merely implying a unity of origin, which does not amount in their minds to a conception of a First Great Cause. An *antu*, or spirit, causes sickness or wants to kill persons and so has to be scared away, but *Petara* is regarded as saving power, the preserver of men; in extreme cases *Petara* alone can help a man; if he dies it is *Petara* alone who has allowed the life to pass away.

The moon and stars are not invoked, but they have an "invisible belonging", a *Petara*, just as all parts of the earth have. It is probable that no inanimate objects themselves, not even the sun, are supposed to be divinities; "it is an underlying spirit in them which is adored, a hidden living influence in them which effects their operations" (Ling Roth, 1, p. 201).

Three beings with definite functions occupy a peculiar position in Iban belief. (1) *Salampandai*, a female spirit and the maker of men. (2) *Pulang*

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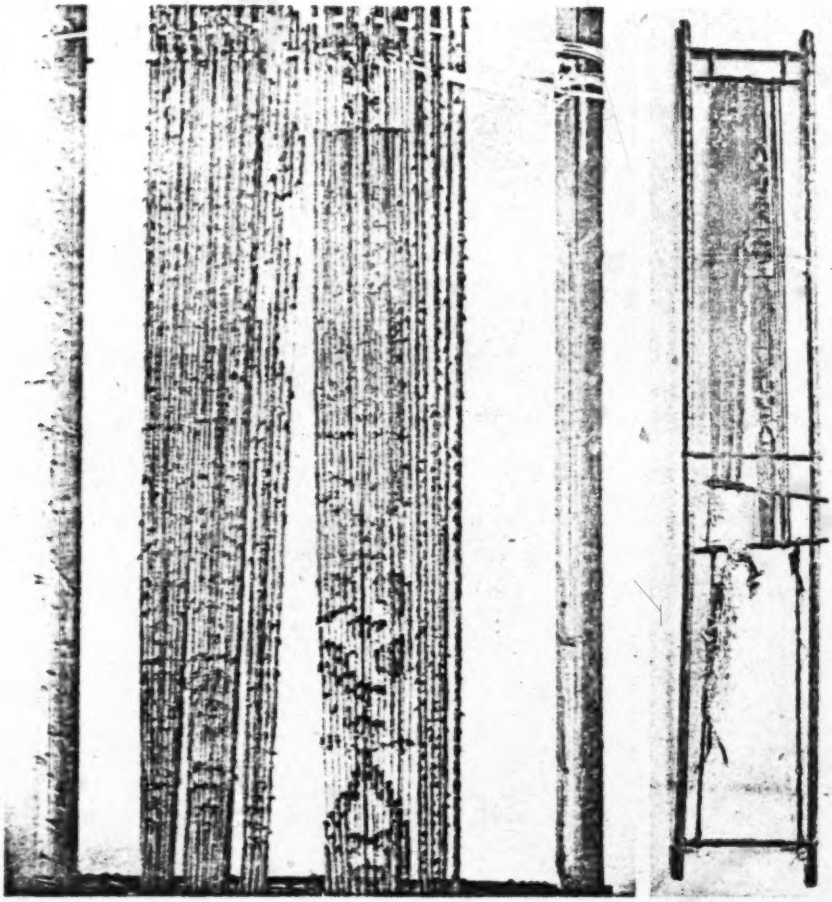

B A

A. *Tangga sáng*, tying frame. Museum of Ethnology, Cambridge. B. Detail of a portion of the tied and partly dyed warp threads of A, p. 9.

[end plate 26]

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Plate XXVII

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×531

Cloth for a *kalambi* as taken from the loom, 35.919, pp. 35, 36

[end plate 27]

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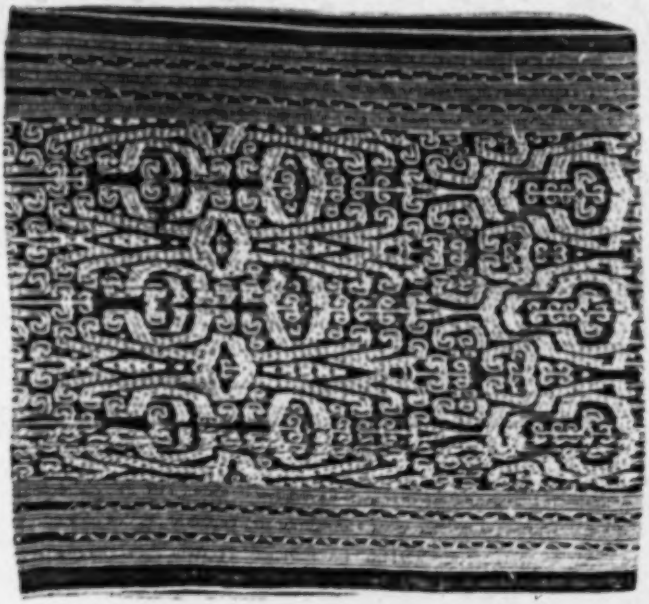
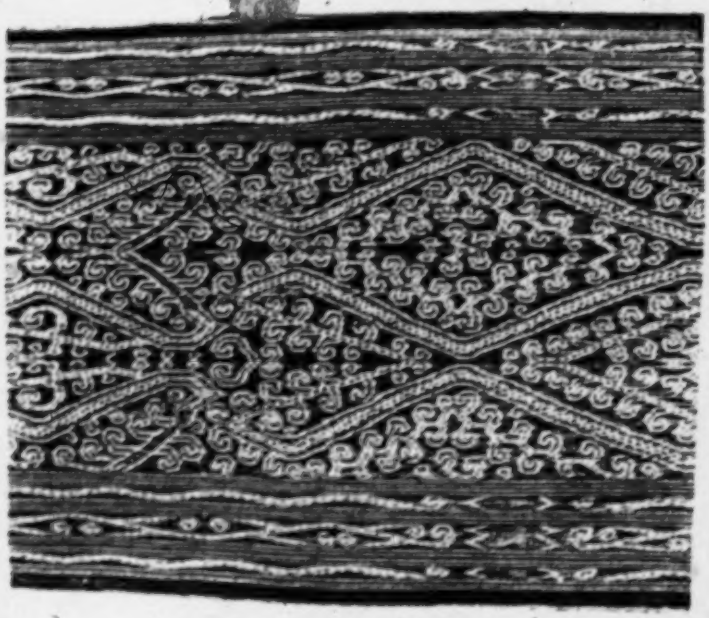


A. *Bidang* 35.859. pp. 68, 69.



B *Bidang* 35.863. pp. 72, 73.

[end plate 28]

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Plate XXIX

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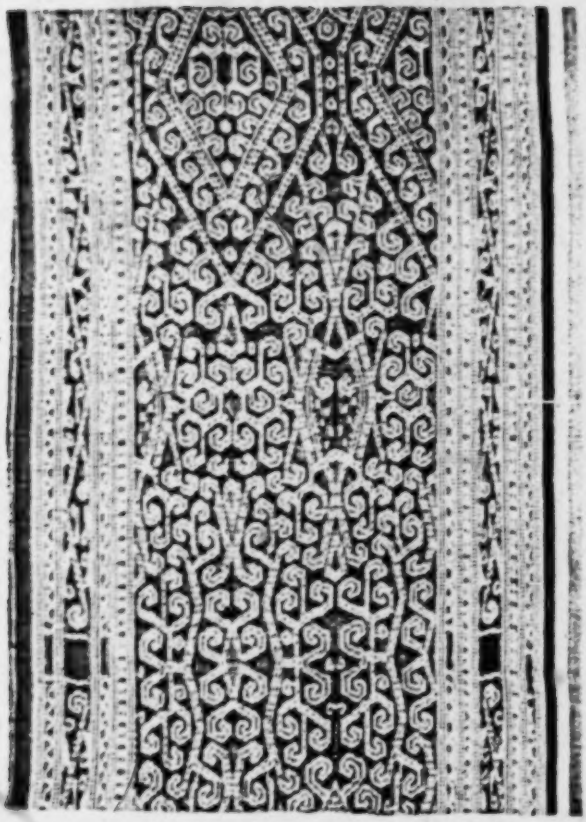
x531



Bidang 35.865, pp. 73-74.

[end plate 29]

Plate XXX

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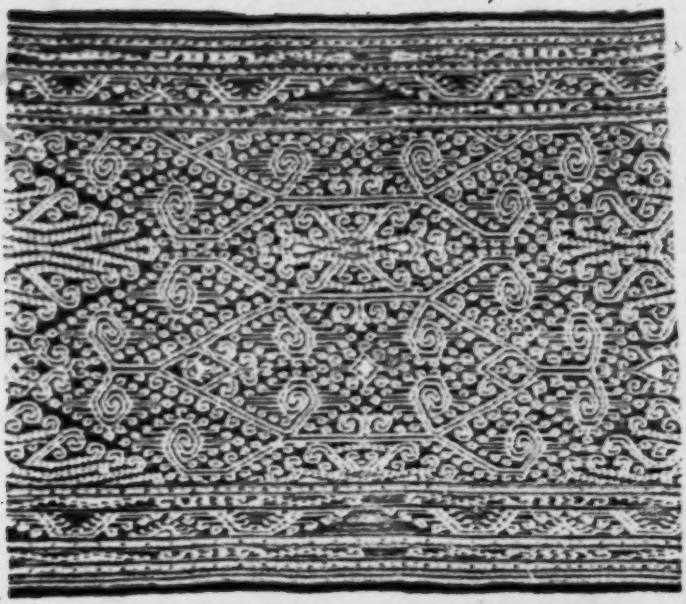

A. *Bidang* 35.872, pp. 78, 79.

B. *Bidang* 35.878, pp. 81, 82

[end plate 30]

Plate XXXI

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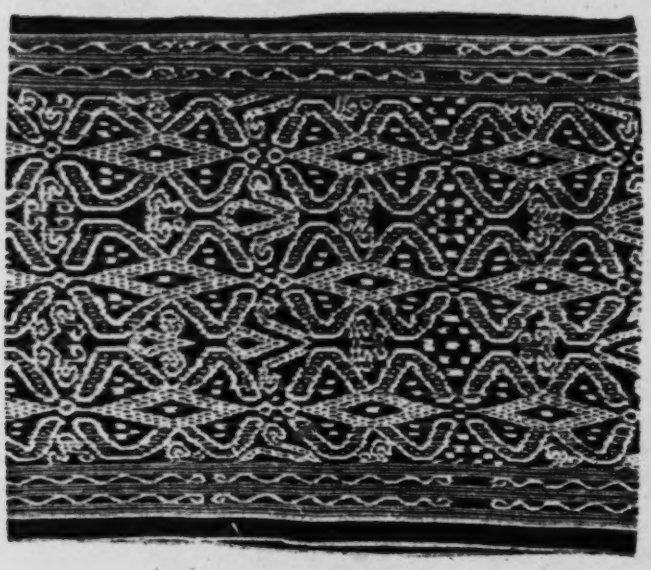
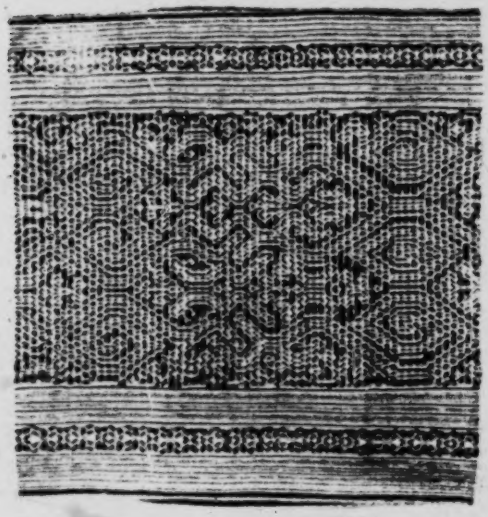
X531



A. *Bidang* 35.882, pp. 83, 84



B. *Bidang* 35.886, pp. 89, 90.

[end plate 31]

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[P.58]

No. of cloth	Length	Width	An analysis of thirty *bidang*				Colour and special notes
			No. of warp ends to inch	Description of warp spacing	No. of weft picks to inch	Description of weft	
35.852	3 ft. 10⅝ in. (118·5 cm.)	1 ft. 9⅝ in. (55·5 cm.)	92 (46 groups)	Ends are paired; warp undyed in pattern stripes	20	Three parallel threads; colour brown	Effective, simple. White patterns on brown background. Pin stripes of black and yellow in borders
35.853	3 ft. 7⅜ in. (110 cm.)	1 ft. 7$\frac{1}{10}$ in. (48 cm.)	72	Single; arranged white and brown alternately to produce stripes; thus 2 w., 3 b., 2 w., 3 b., 6 w., 10 b.	24	Two parallel threads. In part of cloth white —in remainder brown	A simple striped cloth—white and brown
35.854	3 ft. 8½ in. (115·5 cm.)	1 ft. 12⅛ in. (60·4 cm.)	104 ends (52 groups) 128 ends (64 groups)	In main pattern paired Paired in borders	26	Four parallel Brown	Three dyeings required for patterns which have pale-brown outlines—red-brown for the inside of patterns and indigo over red-brown for the background and some spots The edge has been re-dipped in indigo
35.855	3 ft. 7 in. (109·8 cm.)	1 ft. 4⅝ in. (40·5 cm.)	120 ends (60 groups) 112 ends	Paired in pattern stripe Single, in self-colour stripes	24	Single Brown	One dyeing of red-brown on a buff warp
35.856	3 ft. 10 in. (117 cm.)	1 ft. 5⅛ in. (45 cm.)	56 ends 160 ends (80 groups)	Single, in plain central band Paired in border self-colour stripes	20 20	Single Brown	Plain central band of greyish black, indigo over red-brown Narrow patterned side borders of white on red-brown, divided by brown stripes with pin stripes of red, yellow and dark blue
35.857	3 ft. 6 in. (106·7 cm.)	1 ft. 6½ in. (47 cm.)	152 ends (76 groups)	Paired throughout, slightly closer in centre of cloth	42	Single. Brown	A finely woven cloth. Patterns, white and brown. Scarlet, black, and yellow self borders
35.858	3 ft. 10 in. (116·9 cm.)	1 ft. 4½ in. (41·9 cm.)	144 ends (72 groups)	Paired except in narrow central stripe, where in threes	28	Two parallel. Brown	Unusual, but ineffective arrangement of narrow striped patterns, divided by pin stripes in colour. There is a narrow, bright red stripe down the centre of the cloth

35.859	4 ft. (122 cm.)	1 ft. 10 in. (55·9 cm.)	96 ends (48 groups) 152 ends (76 groups)	Paired in pattern stripe In self-colour border stripes	16–20	Four parallel threads in each pick. Brown	White pattern on brown ground. Second dyeing of indigo in splashes on background. Interesting border stripes in black and white, red, black, yellow
35.860	3 ft. 10 in. (116·9 cm.)	1 ft. 10 in. (55·9 cm.)	96 ends (48 groups) 136 ends (68 groups)	Paired throughout In self-colour stripes	22	Two parallel in part, four parallel in remainder. Brown	White pattern on brown ground. Dark blue, yellow, scarlet and white self border stripes
35.861	3 ft. 10 in. (116·9 cm.)	1 ft. 10 in. (55·9 cm.)	96 ends (48 groups)	Paired throughout, a good deal of brown background used in border stripes	20–26	Two parallel. Brown	A loosely woven fabric. White pattern on brown ground. Pale blue stripes at edges and in borders
35.862	4 ft. 1¼ in. (125·1 cm.)	1 ft. 8½ in. (52·1 cm.)	104 ends (52 groups) 128 ends (64 groups)	Paired in broad pattern stripe Paired in black and yellow, threes in scarlet self stripes	26	Two parallel threads in each pick. Brown	White pattern on brown ground. Scarlet, yellow, and black in self-colour border stripes
35.863	4 ft. 1 in. (124·5 cm.)	1 ft. 8½ in. (52·1 cm.)	136 ends (68 groups) 216 ends (72 groups)	Paired in the pattern stripes Threes in the coloured self stripes	22	Three parallel threads. Brown	White pattern on brown ground. White, black, scarlet, and yellow border stripes
35.865	4 ft. 0½ in. (123·2 cm.)	1 ft. 5¼ in. (43·8 cm.)	144 ends (72 groups)	Paired throughout	24	Two parallel	Evenly woven, brilliant colour. Red and brown background, buff pattern. Interesting border stripes
35.866	3 ft. 10 in. (116·9 cm.)	1 ft. 10½ in. (57·1 cm.)	136 ends (68 groups) 144 ends (72 groups)	Paired in central band of pattern Paired in self-colour border stripes	24	Two parallel. Black, may have been brown before second dyeing	A very finely woven cloth. The colour is unusual, the cloth having been dipped in indigo after it had gone through the usual dyeing processes. The result is that the patterns appear as pale blue on a black ground, and in the border stripes red becomes maroon, yellow green, and brown black
35.867	3 ft. 10½ in. (118·1 cm.)	1 ft. 11 in. (58·4 cm.)	88 ends (44 groups)	Paired throughout	16–18	Fourfold and parallel. Brown	Pattern white on a vandyke brown ground. A very coarse cloth
35.868	3 ft. 10 in. (116·9 cm.)	1 ft. 6 in. (45·7 cm.)	112–120 (56–60 groups) 228 ends (76 groups)	Paired but not quite evenly spaced in pattern band Threes in red self stripe	16	Three parallel threads. Light brown	Buff pattern on brown ground. Scarlet, black, and yellow border stripes with a navy blue stripe at the outer edge

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[p.59]

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12: Haddon & Start F-4 (no date) 1936 OC6 Iban OC6

[p. 69]

No. of cloth	Length	Width	An analysis of thirty *bidang*				Colour and special notes
			No. of warp ends to inch	Description of warp spacing	No. of weft picks to inch	Description of weft	
35.869	3 ft. 8½ in. (113·7 cm.)	1 ft. 8½ in. (51·7 cm.)	168 ends (56 groups) 192 ends (48 groups)	Threes in pattern stripe Fours in self-colour stripes	18	Fourfold and parallel. Dark brown	Strong colour effect as most of the red-brown background has been over-dyed blue, thus giving vandyke brown effect. Red, yellow, blue, and white self-colour border stripes
35.870	3 ft. 8 in. (111·8 cm.)	1 ft. 9 in. (53·4 cm.)	88 ends (44 groups) 108 ends (36 groups)	Paired in pattern bands Threes in self-colour stripes	24	Three parallel threads. Brown	Background red-brown and black, owing partly to over-dyeing with indigo, the pattern on it in buff and white. Red, yellow, and black self border stripes
35.871	3 ft. 10 in. (116·9 cm.)	1 ft. 7 in. (48·2 cm.)	112 ends (56 groups) 144 ends (72 groups)	Paired throughout in pattern band In self-colour stripes	23	Three parallel threads. Brown	An evenly woven cloth, of crisp firm texture
35.872	3 ft. 8 in. (111·8 cm.)	1 ft. 7½ in. (49·5 cm.)	128 ends (64 groups)	Paired throughout	20	Single. Brown	Very clear pattern in buff on a reddish brown ground with occasional vandyke spots, also touches of blue in borders. The fineness of the weft produces a fine, soft cloth
35.873	3 ft. 8 in. (111·8 cm.)	1 ft. 9 in. (53·4 cm.)	92 ends (46 groups) 176 ends (88 groups)	Paired in pattern portion and in self-colour stripes	26	Two parallel threads. Brown	Buff pattern on red-brown background
35.874	3 ft. 11 in. (119·4 cm.)	1 ft. 11 in. (58·4 cm.)	80 ends (40 groups)	Paired throughout	16	Four parallel threads. Dark brown	Extra large, coarse cloth. Buff pattern on brown ground. Border stripes and dividing lines in white, yellow, black, and brown
35.875	4 ft. 0½ in. (123·2 cm.)	1 ft. 8½ in. (51·8 cm.)	96 ends (48 groups)	Paired throughout	20	Single. Brown	Large cloth. Buff on reddish brown ground. Generally of dull appearance. Border stripes black and yellow only

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35.877	3 ft. 9½ in. (114·7 cm.)	1 ft. 7½ in. (49·3 cm.)	168 ends (56 groups)	Threes practically throughout, one or two fours	20–22	Three parallel. Brown	Very gay in colour in border stripes. Red background to central band, overdyed indigo, the pattern in buff with some parts in red. Red, yellow, blue, and black and white borders
35.878	3 ft. 8 in. (111·8 cm.)	1 ft. 7½ in. (50·1 cm.)	96 ends (48 groups) 108 ends (36 groups) 192 ends on an average	Curious irregularity in grouping of threads paired for most of pattern stripes, but in threes for 4 in. at left In self-colour stripes, threes and fours indiscriminately	15–16	Three parallel. Brown	Most brilliantly coloured in whole collection although similar to patterns in white, outlined dark brown, on reddish brown background. Narrow border stripes in yellow, scarlet, white, and navy blue, with a black and white horizontally striped border as well
35.879	3 ft. 6½ in. (108 cm.)	1 ft. 8½ in. (52·1 cm.)	132 ends (44 groups) 144 ends (36 groups)	In threes in patterned stripe In fours in red and blue self stripes	20	Two parallel. Brown	Generally dull in tone. Warps of pattern stripe dipped in weak indigo bath, after having been dyed brown. Broad outer stripes of indigo and small border stripes of red, yellow, and black
35.880	3 ft. 9 in. (114·4 cm.)	2 ft. ½ in. (62·9 cm.)	96 ends (48 groups)	Mostly grouped in twos and threes	26	Two parallel. Brown	Border stripes somewhat unusual in colour, navy blue, scarlet and orange used. The orange, yellow overdyed red. Buff pattern on reddish and black ground
35.883	3 ft. 5 in. (104·2 cm.)	Varies from 1 ft. 5 in. (43·2 cm.) to 1 ft. 3½ in. (39·4 cm.)	120–168 in patterned section 192–280 in finer border stripes	Very uneven spacing. In pattern stripes mostly paired with occasional single warps. Similarly in border stripes	24 of ordinary cloth weft, and in pattern 24 of coloured weft	Two parallel white, right across cloth between each pattern pick; eight parallel strands of red or four of black for pattern picks	Red and black embroidered pattern threads turned back at border stripes. Border stripes of red, yellow, and black enclose three narrow white stripes with embroidery, in black and red on them
35.894	3 ft. 9 in. (114·4 cm.)	1 ft. 7½ in. (50·1 cm.)	112 ends (56 groups) 144 ends (72 groups)	Paired throughout but closer spacing in dark brown self stripes	20	Three threads parallel	White pattern on brown ground. Dark brown border stripes near outer edge and series of brown and yellow self-colour pinstripes with two narrow patterned border stripes between
35.882	4 ft. 3 in. (129·6 cm.)	1 ft. 9½ in. (53·9 cm.)	108 ends (36 groups)	Grouped in threes throughout	20	Fourfold. Blue	Coarse cloth of firm texture. White pattern on blue background. Border stripes in red, yellow, and white. General colour scheme pleasant

[p. 61]

[pp. 62–122 were not processed]

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

Plate XXXIII

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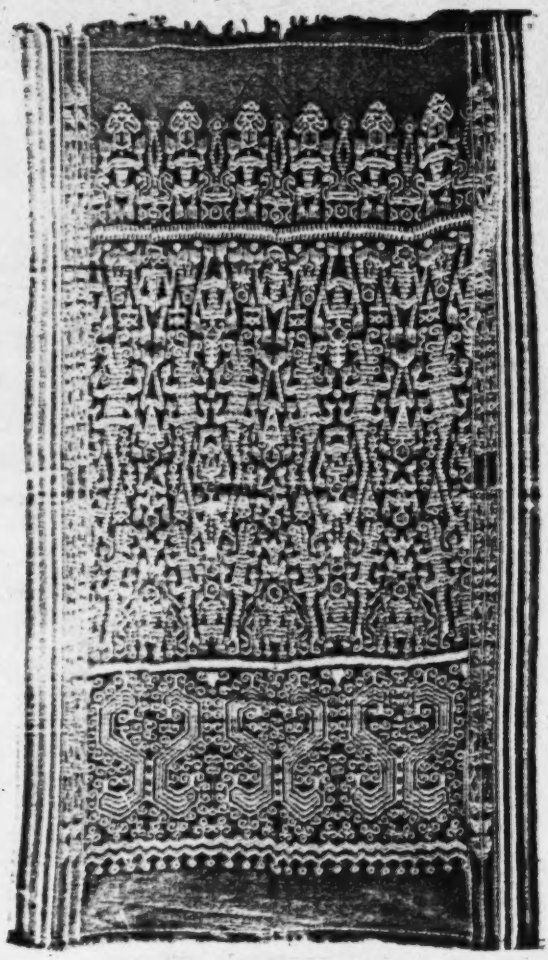
x531



Pha 35.929 pp. 107, 108.

[end plate 33]

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

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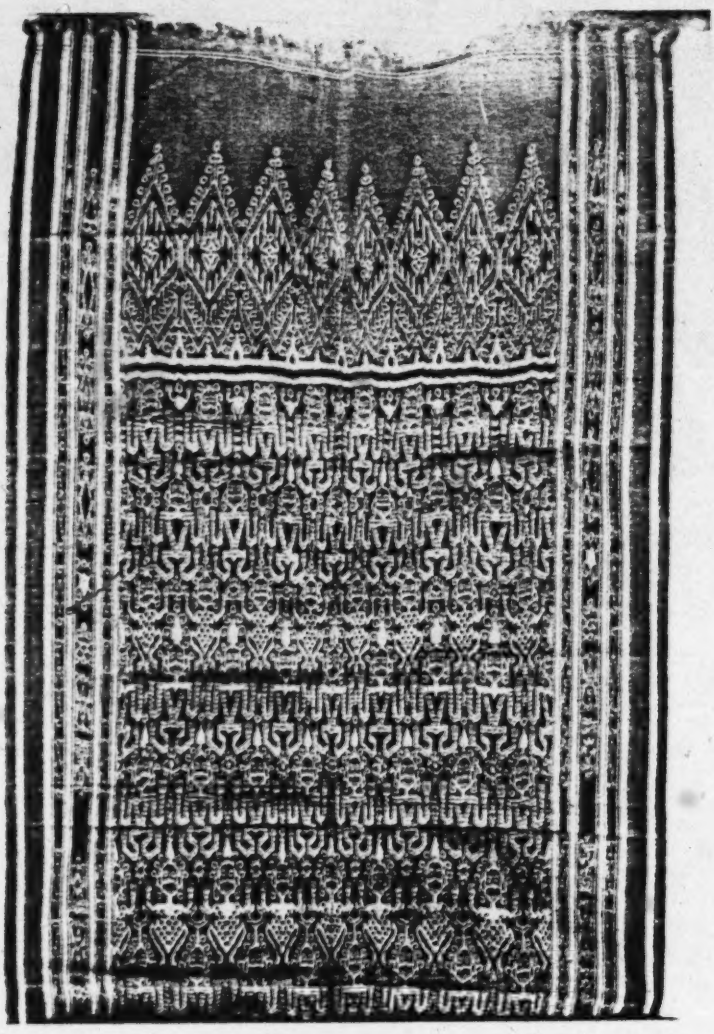

Pua 35.925. Ff. 111, 112.

[end plate 34]

12: Haddon & Start E-4 (no date) 1936 OC6 Iban OC6

Plate XXXV

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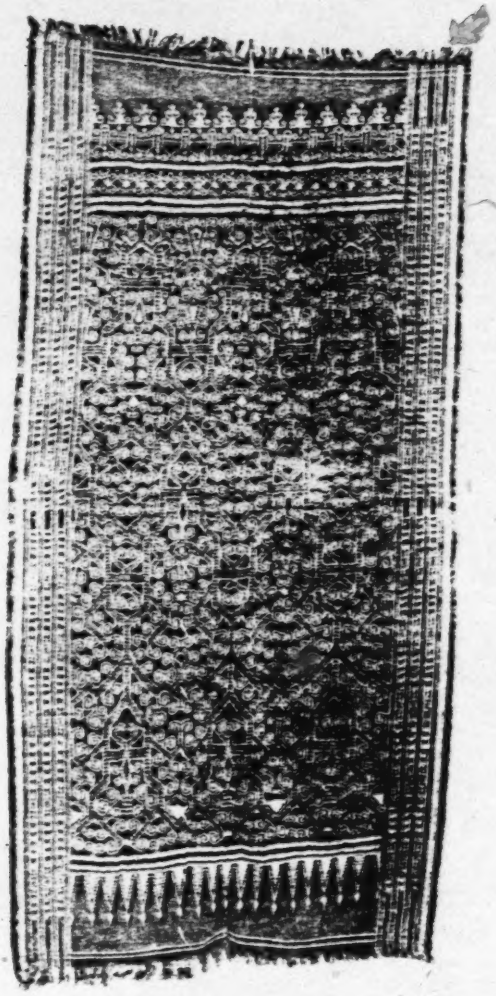

Pus 35 922, pg. 116–118.

[end plate 35]

1:Alkema & Bezemer--577 E-4, 5 (no date)1927 OB1 Indonesia

Sumba OF17
Timor OF20
Borneo OC1
Iban OC6

[516 cont.]

S 286 531 tint is imposed upon a red background. Lovely, fiery orange sparkles here and there on the [517] cloth next to red and yellow; tiny specks of blue and green soften the vivid color effects" (1).

1. J.A. Loebèr, op. cit., p. 52.

S 291 In the eastern part of Sumba the warp is ikat dyed; in the western part of the island the floating woof prevails. The men as well as the women wear these cloths, not as sarongs, but thrown over the shoulder.

T 291 286 Timorese cloth, the sarongs worn by the women, is characteristically made of narrow, horizontal strips with gay colors running through it. It is tied under the breasts.

B 286 291 [287] The original woven work of Borneo, as far as the coast is concerned, and commonly farther into the interior, has been driven out by foreign influences. Where this has not happened, the clothing is still largely made from pounded tree-bark, often beautifully decorated. Furthermore, as we have already mentioned, the weaving of fibers is still carried on here, and, in addition, as a higher stage of development, cotton weaving. Among some tribes, for example, the Kantoek-Dajak and various small tribes in the north and northwest of this great island, there are ikat fabrics whose patterns remind one of the Sumba fabrics.

The state of the weaving here, too, naturally is closely connected with clothing. There are some differences in details, but in the main it is the same among all the tribes of the interior. For the Dajak men the primary article is the loincloth; originally made of pounded tree-bark, it is now increasingly of cotton.

I 286 [462] The upper part of the body is commonly covered with a jacket, also of pounded tree-bark or white cotton. Among the Sea Dajak this jacket is woven by the women in various colored patterns.

I 291 The principal article of clothing for women is a jacket of tree-bark or white cotton, sometimes reaching the ankles, sometimes only to the knees. The Sea Dajak are an exception also as regards female attire, which consists chiefly of a short